Engineering Note Page (ENP-2)

REVISION 2018-10-17

Please read all notes prior to installation of the component

DESIGN INFORMATION

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

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

The responsibility of the undersigned is limited to the verification of the structural capacity of the 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 transfer blocks. Structural elements such as walls, posts, connectors, and transfer 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 floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at http://www.kottgroup.com.

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 transfer 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.

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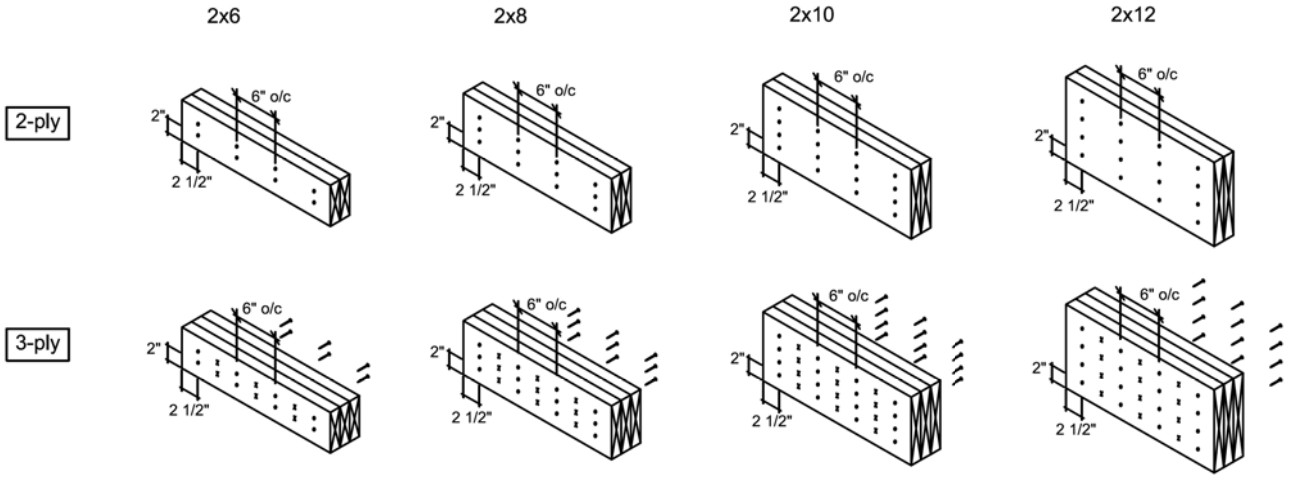
Per:____joshua.nabua_____

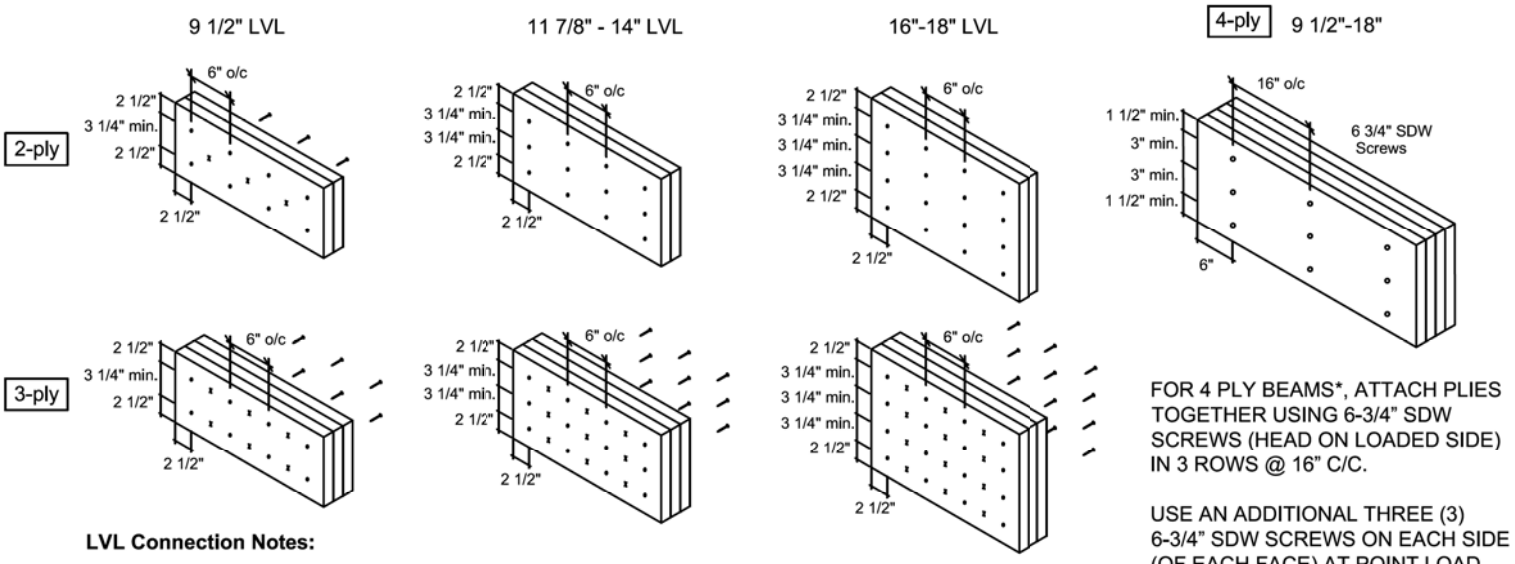
Conventional Connections



Conventional Connection Notes:

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

LVL Connections



LVL Connection Notes:

-LVL ply width is 1-3/4"
-Nails to be 3 1/2" common wire nails.
-Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
-Minimum 3 1/4" spacing between rows.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.
- Head of all specified screws must be on the loaded side.

FOR 4 PLY BEAMS*, ATTACH PLIES TOGETHER USING 6-3/4" SDW SCREWS (HEAD ON LOADED SIDE) IN 3 ROWS @ 16" C/C.

USE AN ADDITIONAL THREE (3) 6-3/4" SDW SCREWS ON EACH SIDE (OF EACH FACE) AT POINT LOAD LOCATIONS @ 1/2 SPACING, WHERE APPLICABLE.

**UNLESS NOTED OTHERWISE ON LAYOUT OR CALCULATION SHEET OF BEAM IN THE FLOOR PACKAGE*

Multiple Member Connections

All connections are for uniformly distributed loads.

For multi-ply connections of I-joists, refer to Manufacturer's Installation Guide

Last revised: February 19, 2021

KOTT Inc.
3228 Moodie Drive
Ottawa, ON
K2H 7V1
613-838-2775

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
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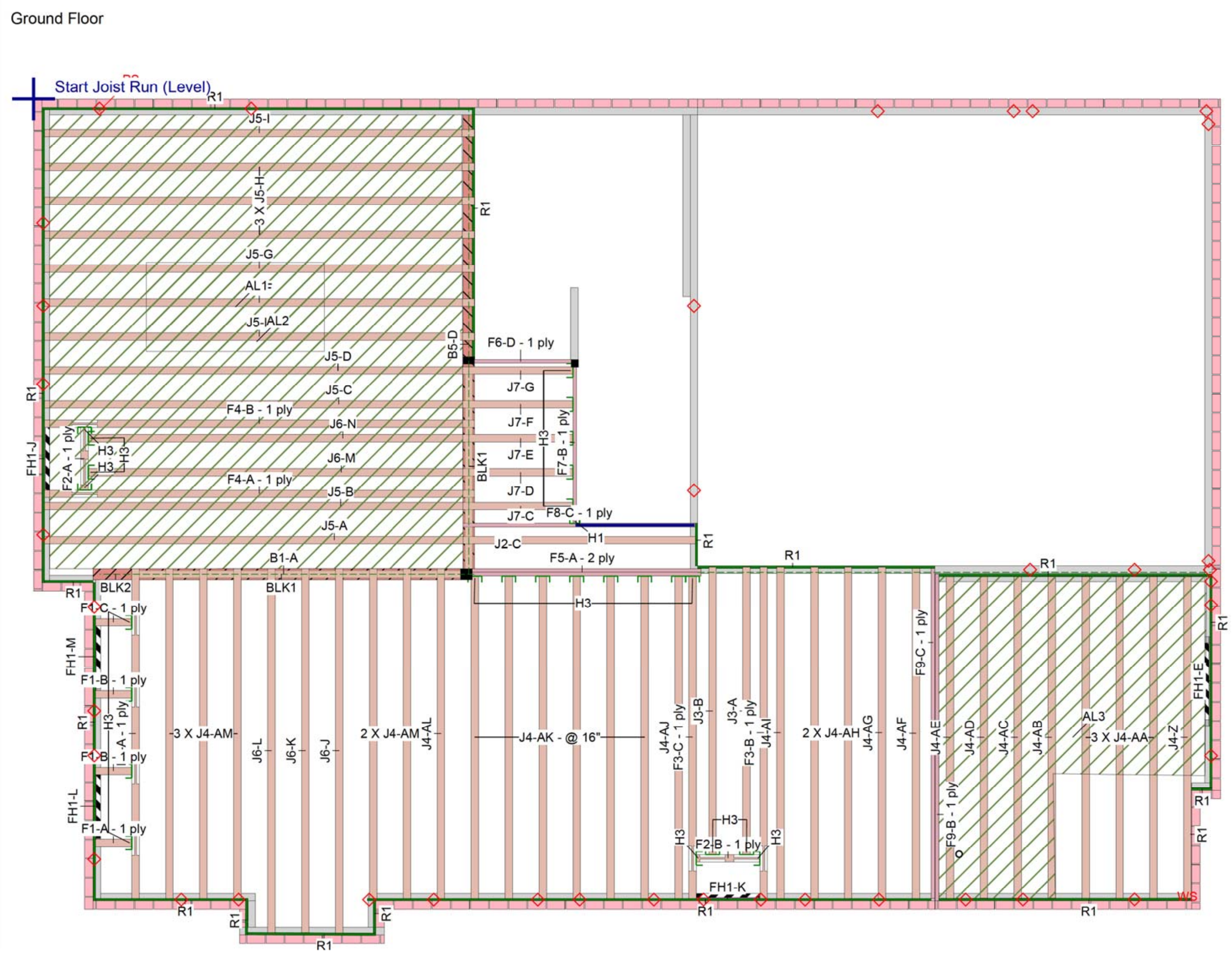
Per: joshua.nabua



Ground Floor

LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	Forex 2.0E-3000Fb LVL	1.75	11.875			2	14-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	10-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875			1	10-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			1	8-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	AJS 24	3.5	11.875			2	18-0-0
F3	AJS 24	3.5	11.875			3	14-0-0
F2	AJS 24	3.5	11.875			2	4-0-0
F1	AJS 24	3.5	11.875			4	2-0-0
J5	AJS 24	3.5	11.875			11	18-0-0
J6	AJS 24	3.5	11.875			5	16-0-0
J4	AJS 24	3.5	11.875			26	14-0-0
J3	AJS 24	3.5	11.875			2	12-0-0
J2	AJS 24	3.5	11.875			1	10-0-0
J7	AJS 24	3.5	11.875			5	6-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			12	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 24	3.5	11.875	LinFt		Varies	16-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HUS1.81/10			30 10dx1 1/2	10 16d
H3	25	LF3511			12 10d	2 #8x1 1/4WS

JOB INFORMATION

Builder
GREENPARK

Project
ROUNDEL HOMES INC

Shipping
PINETREE 38-1-2
RICHMOND HILL,ON

Sales Rep
RALPH MIRIGELLO

Designer
W C

Plotted
June 08, 2021

Layout Name
PT38-1-2 STANDARD & DECK CONDITION

Job Path

DESIGN CRITERIA

Ground Floor

Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012

Floor

Loads

Live	40
Dead	15

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

Vibration

CCMC References

Boise - 12472-R , 12787-R
LP - 12412-R
Forex - 14056-R

Kott Inc.
3228 Moodie Dr, Ottawa
14 Anderson Blvd, Uxbridge
Ontario

613-838-2775 / 905-642-4400

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1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.

Legend

WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 24 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875

Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

Version 21.20.293 Powered by iStruct™ Dataset: embedded

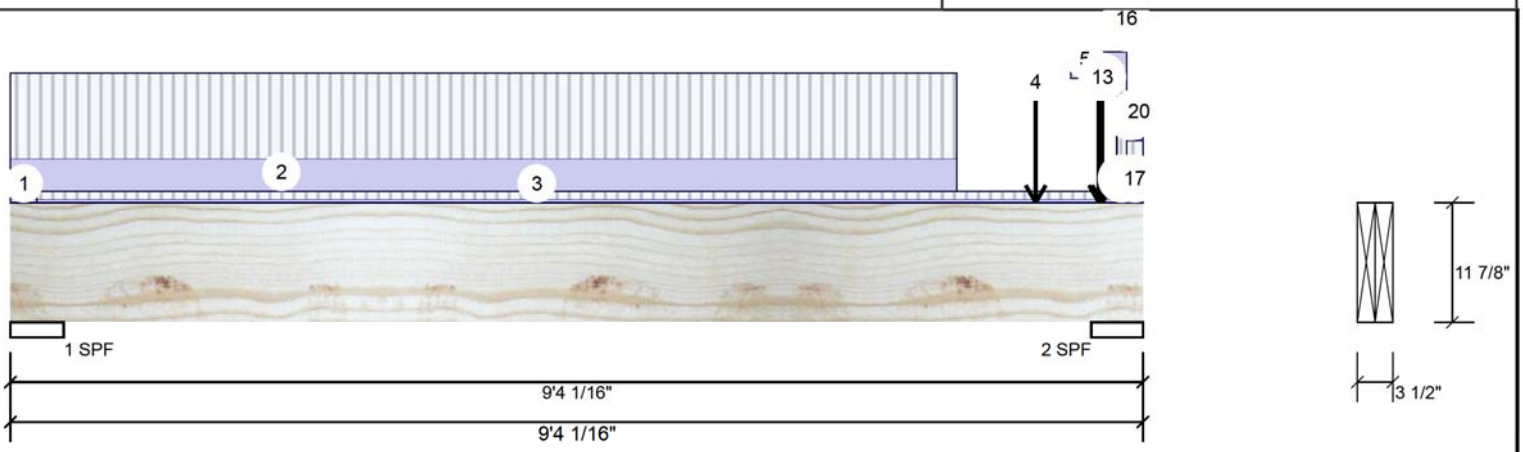
This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: [illegible]

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1327	540	0	0
2	Vertical	2651	1105	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	24%	675 / 1990	2665	L	1.25D+1.5L
2 - SPF	5.093"	Vert	49%	1381 / 3977	5358	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5239 ft-lb	4'7 13/16"	34261 ft-lb	0.153 (15%)	1.25D+1.5L	L
Unbraced	5239 ft-lb	4'7 13/16"	34261 ft-lb	0.153 (15%)	1.25D+1.5L	L
Shear	2792 lb	7'11 1/16"	11596 lb	0.241 (24%)	1.25D+1.5L	L
Perm Defl in.	0.017 (L/5931)	4'8"	0.287 (L/360)	0.061 (6%)	D	Uniform
LL Defl inch	0.043 (L/2417)	4'8"	0.215 (L/480)	0.199 (20%)	L	L
TL Defl inch	0.060 (L/1717)	4'8"	0.430 (L/240)	0.140 (14%)	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 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top must be continuously laterally braced.
7 Bottom must have sheathing attached or be continuously braced.
8 Lateral slenderness ratio based on full section width.

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

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-10	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 7-9-7		Near Face	97 PLF	260 PLF	0 PLF	0 PLF	
3	Tie-In	0-2-10 to 9-1-5	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	8-5-7		Near Face	89 lb	238 lb	0 lb	0 lb	J4

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

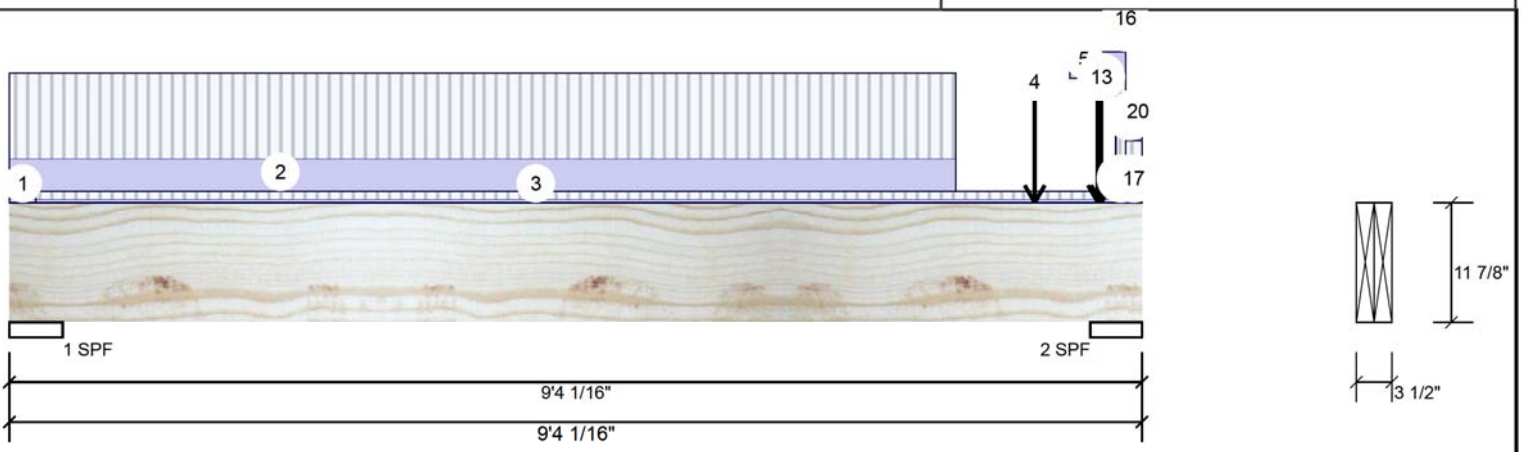
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	8-8-15 to 9-2-7		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	8-11-11		Top	489 lb	1242 lb	0 lb	0 lb	F8 F8
	Bearing Length	0-5-8							
13	Point	9-0-0		Near Face	76 lb	203 lb	0 lb	0 lb	F3
14	Part. Uniform	9-1-7 to 9-2-7		Top	118 PLF	258 PLF	0 PLF	0 PLF	J4
15	Tapered Start	9-2-6		Top	8 PLF	21 PLF	0 PLF	0 PLF	
	End	9-2-7			8 PLF	21 PLF	0 PLF	0 PLF	
16	Tapered Start	9-2-6		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	9-2-7			0 PLF	1 PLF	0 PLF	0 PLF	
17	Part. Uniform	9-2-7 to 9-4-1		Top	59 PLF	129 PLF	0 PLF	0 PLF	J4
18	Tapered Start	9-2-7		Top	4 PLF	11 PLF	0 PLF	0 PLF	
	End	9-4-1			4 PLF	11 PLF	0 PLF	0 PLF	
20	Part. Uniform	9-2-7 to 9-4-1		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

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 roation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

Forex
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613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
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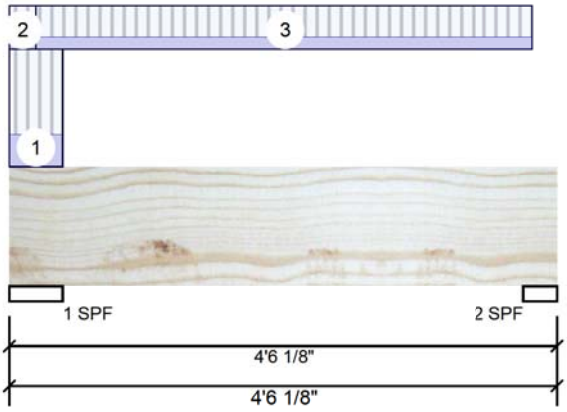
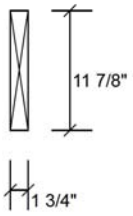
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F6-D Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	25	21	0	0
2	Vertical	14	16	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	1%	26 / 38	64	L	1.25D+1.5L
2 - SPF	3.330"	Vert	1%	20 / 21	41	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	39 ft-lb	2'4"	17130 ft-lb	0.002 (0%)	1.25D+1.5L	L
Unbraced	39 ft-lb	2'4"	17130 ft-lb	0.002 (0%)	1.25D+1.5L	L
Shear	16 lb	3'2 15/16"	3769 lb	0.004 (0%)	1.4D	Uniform
Perm Defl in.	0.000 (L/292759)	2'4 1/16"	0.131 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/303609)	2'4"	0.098 (L/480)	0.002 (0%)	L	L
TL Defl inch	0.000 (L/149043)	2'4"	0.196 (L/240)	0.002 (0%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must be laterally braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-4	0-5-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-2-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 4-3-11	0-2-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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613-838-2775 905-642-4400

CITY OF RICHMOND HILL
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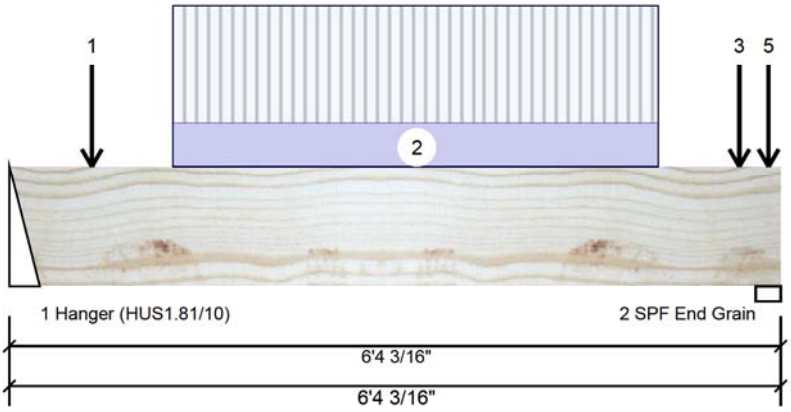
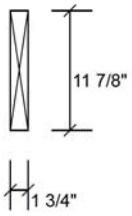
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F7-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	234	103	0	0
2	Vertical	391 (-47)	172	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	12%	128 / 350	479	L	1.25D+1.5L
2 - SPF End Grain	2.468"	Vert	25%	215 / 587	802	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	718 ft-lb	3'2 1/4"	17130 ft-lb	0.042 (4%)	1.25D+1.5L	L
Unbraced	718 ft-lb	3'2 1/4"	17130 ft-lb	0.042 (4%)	1.25D+1.5L	L
Shear	497 lb	1'2 7/8"	5798 lb	0.086 (9%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/25187)	3'2 3/8"	0.201 (L/360)	0.014 (1%)	D	Uniform
LL Defl inch	0.007 (L/10903)	3'2 3/8"	0.151 (L/480)	0.044 (4%)	L	L
TL Defl inch	0.009 (L/7609)	3'2 3/8"	0.301 (L/240)	0.032 (3%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fill all hanger nailing holes.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must have sheathing attached or be continuously braced.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-8-2		Far Face	32 lb	84 lb	0 lb	0 lb	J7
2	Part. Uniform	1-4-2 to 5-4-2		Far Face	30 PLF	81 PLF	0 PLF	0 PLF	
3	Point	6-0-2		Far Face	26 lb	68 lb	0 lb	0 lb	J7
4	Point	6-3-0		Top	66 lb	149 lb	0 lb	0 lb	C1
	Bearing Length	0-3-8							
5	Point	6-3-0		Top	0 lb	-47 lb	0 lb	0 lb	C1
	Self Weight				5 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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

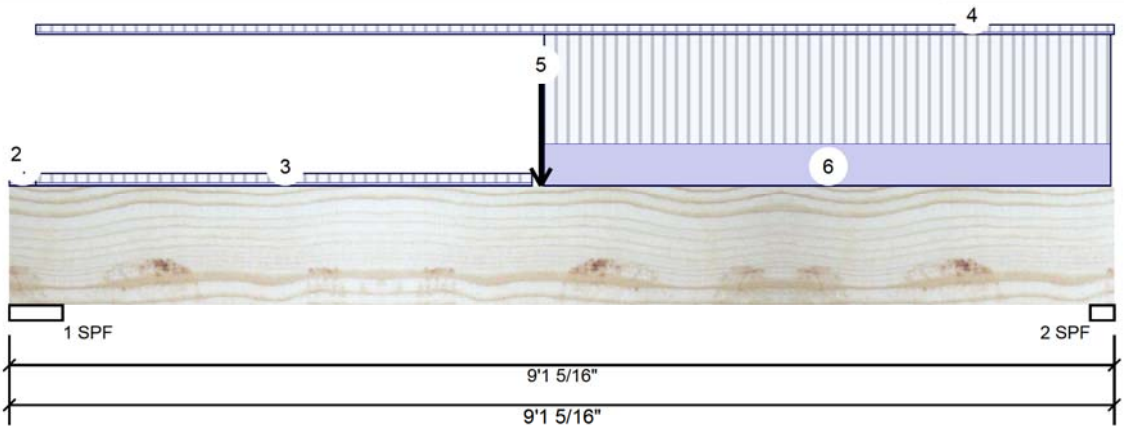
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

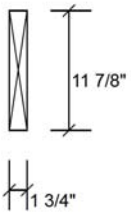
CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F8-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	454	202	0	0
2	Vertical	811	336	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	17%	252 / 681	933	L	1.25D+1.5L
2 - SPF	2.375"	Vert	64%	420 / 1216	1636	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3237 ft-lb	4'10 15/16"	17130 ft-lb	0.189 (19%)	1.25D+1.5L	L
Unbraced	3237 ft-lb	4'10 15/16"	17130 ft-lb	0.189 (19%)	1.25D+1.5L	L
Shear	1187 lb	7'11 1/16"	5798 lb	0.205 (20%)	1.25D+1.5L	L
Perm Defl in.	0.021 (L/4874)	4'9 11/16"	0.287 (L/360)	0.074 (7%)	D	Uniform
LL Defl inch	0.050 (L/2070)	4'10 1/16"	0.215 (L/480)	0.232 (23%)	L	L
TL Defl inch	0.071 (L/1453)	4'10"	0.430 (L/240)	0.165 (17%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must be laterally braced at a maximum of 4'8 3/4" o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-10	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-3-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 4-3-11	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-2-10 to 9-1-5	0-3-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	4-4-9		Far Face	103 lb	234 lb	0 lb	0 lb	F7
6	Part. Uniform	4-4-14 to 9-0-15		Top	70 PLF	184 PLF	0 PLF	0 PLF	
	Self Weight				5 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 roation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

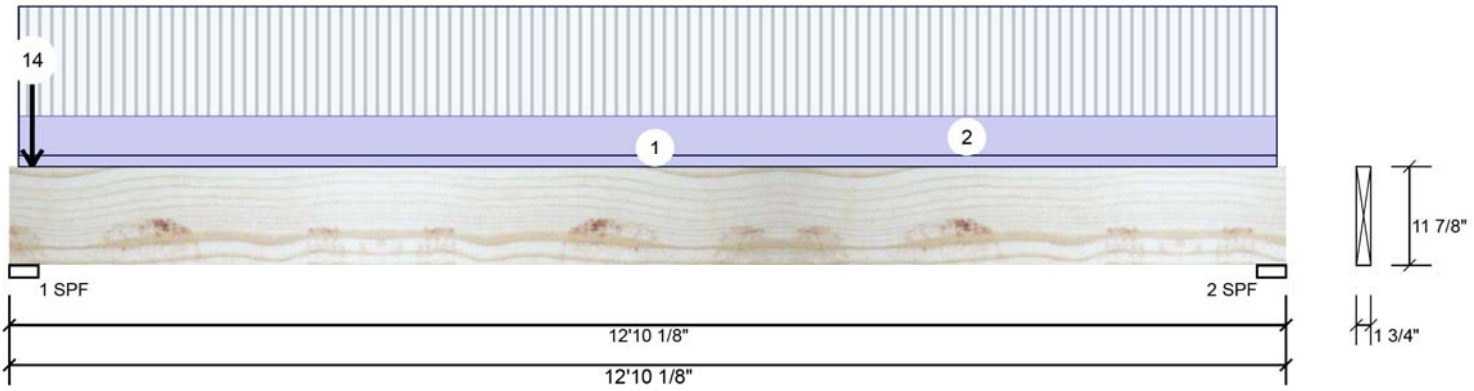
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	126	146	52	0
2	Vertical	64	61	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	11%	182 / 241	424	L	1.25D+1.5L +S
2 - SPF	3.500"	Vert	5%	76 / 96	172	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	521 ft-lb	6'5 1/16"	16788 ft-lb	0.031 (3%)	1.25D+1.5L	L
Unbraced	521 ft-lb	6'5 1/16"	16788 ft-lb	0.031 (3%)	1.25D+1.5L	L
Shear	146 lb	11'6 3/4"	5682 lb	0.026 (3%)	1.25D+1.5L	L
Perm Defl in.	0.011 (L/13059)	6'5 1/16"	0.413 (L/360)	0.028 (3%)	D	Uniform
LL Defl inch	0.012 (L/12320)	6'5 1/16"	0.310 (L/480)	0.039 (4%)	L+0.5S	L
TL Defl inch	0.023 (L/6339)	6'5 1/16"	0.619 (L/240)	0.038 (4%)	D+L+0.5S	L

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

PASS-THRU SQUASH BLOCK FRAMING 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 3.5.
2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must be laterally braced at bearings.

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-1-2 to 12-9-0		Top	1 PLF	0 PLF	0 PLF	0 PLF	
2	Tie-In	0-1-2 to 12-9-0	0-3-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-2-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
4	Point	0-2-12		Top	9 lb	24 lb	0 lb	0 lb	J4

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

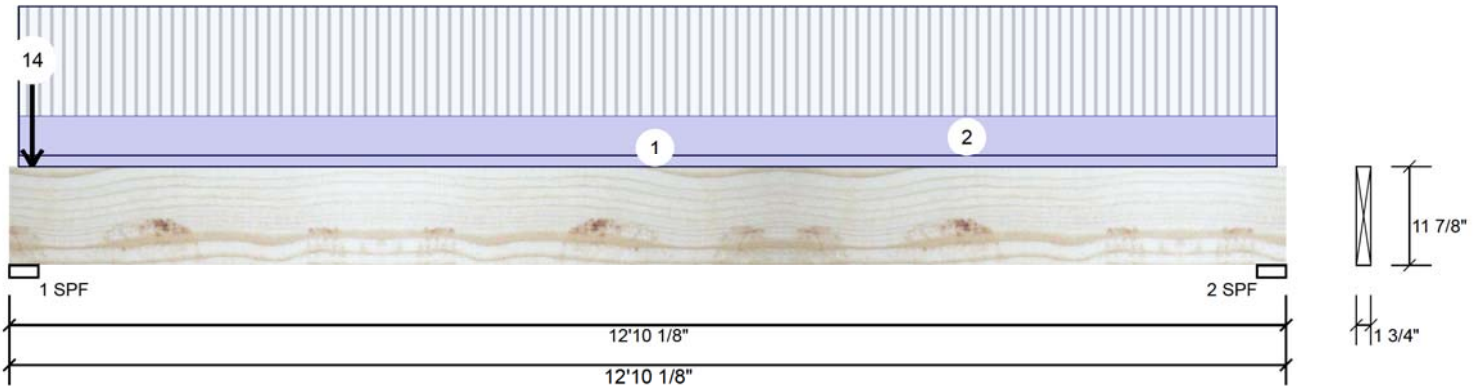
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-5-8							
5	Point	0-2-12		Top	8 lb	0 lb	20 lb	0 lb	
	Bearing Length	0-5-8							
6	Point	0-2-12		Top	9 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
7	Point	0-2-12		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Point	0-2-12		Top	7 lb	19 lb	0 lb	0 lb	J4
	Bearing Length	0-5-8							
9	Point	0-2-12		Top	6 lb	0 lb	16 lb	0 lb	
	Bearing Length	0-5-8							
10	Point	0-2-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
11	Point	0-2-12		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
12	Point	0-2-12		Top	7 lb	19 lb	0 lb	0 lb	J4
	Bearing Length	0-5-8							
13	Point	0-2-12		Top	6 lb	0 lb	16 lb	0 lb	
	Bearing Length	0-5-8							
14	Point	0-2-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				5 PLF				

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

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Notes

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

Lumber

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2. 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 roation
6. For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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CITY OF RICHMOND HILL
BUILDING DIVISION
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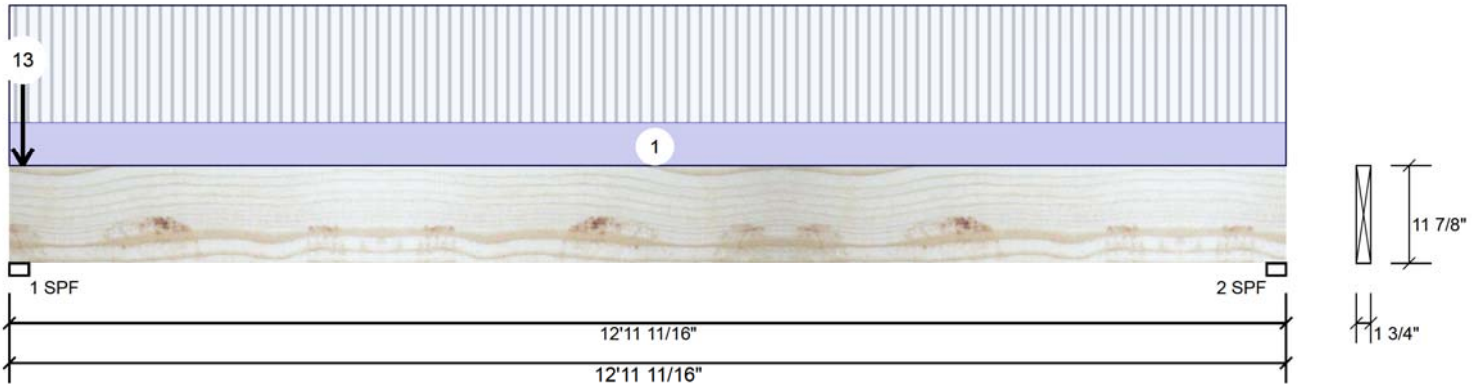
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	139	150	61	0
2	Vertical	86	63	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	18%	188 / 270	458	L	1.25D+1.5L +S
2 - SPF	2.375"	Vert	8%	79 / 130	209	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	649 ft-lb	6'5 7/8"	17130 ft-lb	0.038 (4%)	1.25D+1.5L	L
Unbraced	649 ft-lb	6'5 7/8"	17130 ft-lb	0.038 (4%)	1.25D+1.5L	L
Shear	177 lb	1'2 1/4"	5798 lb	0.030 (3%)	1.25D+1.5L	L
Perm Defl in.	0.013 (L/11906)	6'5 7/8"	0.423 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.017 (L/8719)	6'5 7/8"	0.318 (L/480)	0.055 (6%)	L+0.5S	L
TL Defl inch	0.030 (L/5033)	6'5 7/8"	0.635 (L/240)	0.048 (5%)	D+L+0.5S	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 2.375.
2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must be laterally braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-11-11	0-4-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-1-10		Top	6 lb	0 lb	16 lb	0 lb	
	Bearing Length	0-5-8							
3	Point	0-1-10		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
5	Point	0-1-10		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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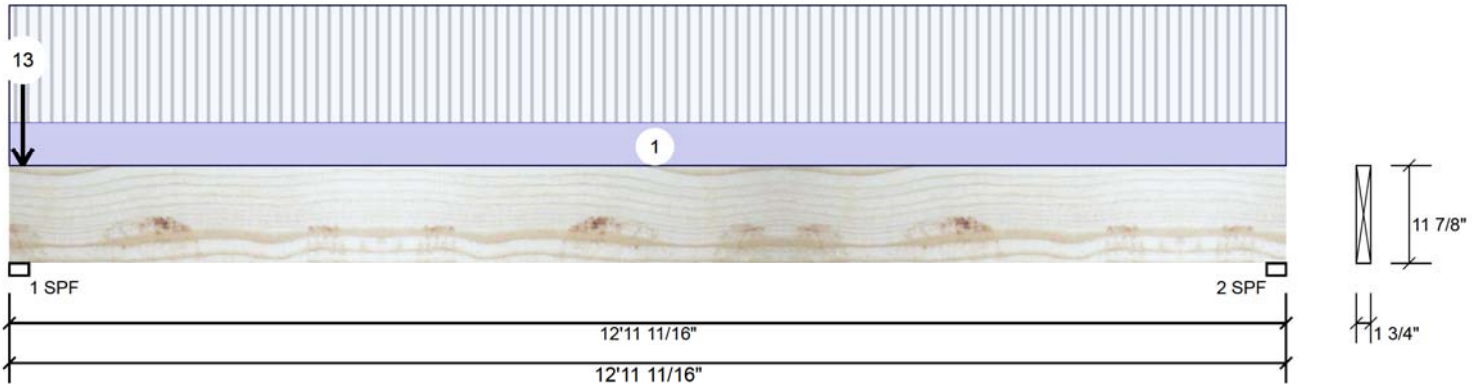
CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-5-8							
6	Point	0-1-10		Top	6 lb	0 lb	16 lb	0 lb	
	Bearing Length	0-5-8							
7	Point	0-1-10		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Point	0-1-10		Top	7 lb	19 lb	0 lb	0 lb	J4
	Bearing Length	0-5-8							
9	Point	0-1-10		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
10	Point	0-1-10		Top	11 lb	0 lb	29 lb	0 lb	
	Bearing Length	0-5-8							
11	Point	0-1-10		Top	10 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
12	Point	0-1-10		Top	13 lb	34 lb	0 lb	0 lb	J4
	Bearing Length	0-5-8							
13	Point	0-1-10		Top	10 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				5 PLF				

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

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

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

June 28, 2021

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 roation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

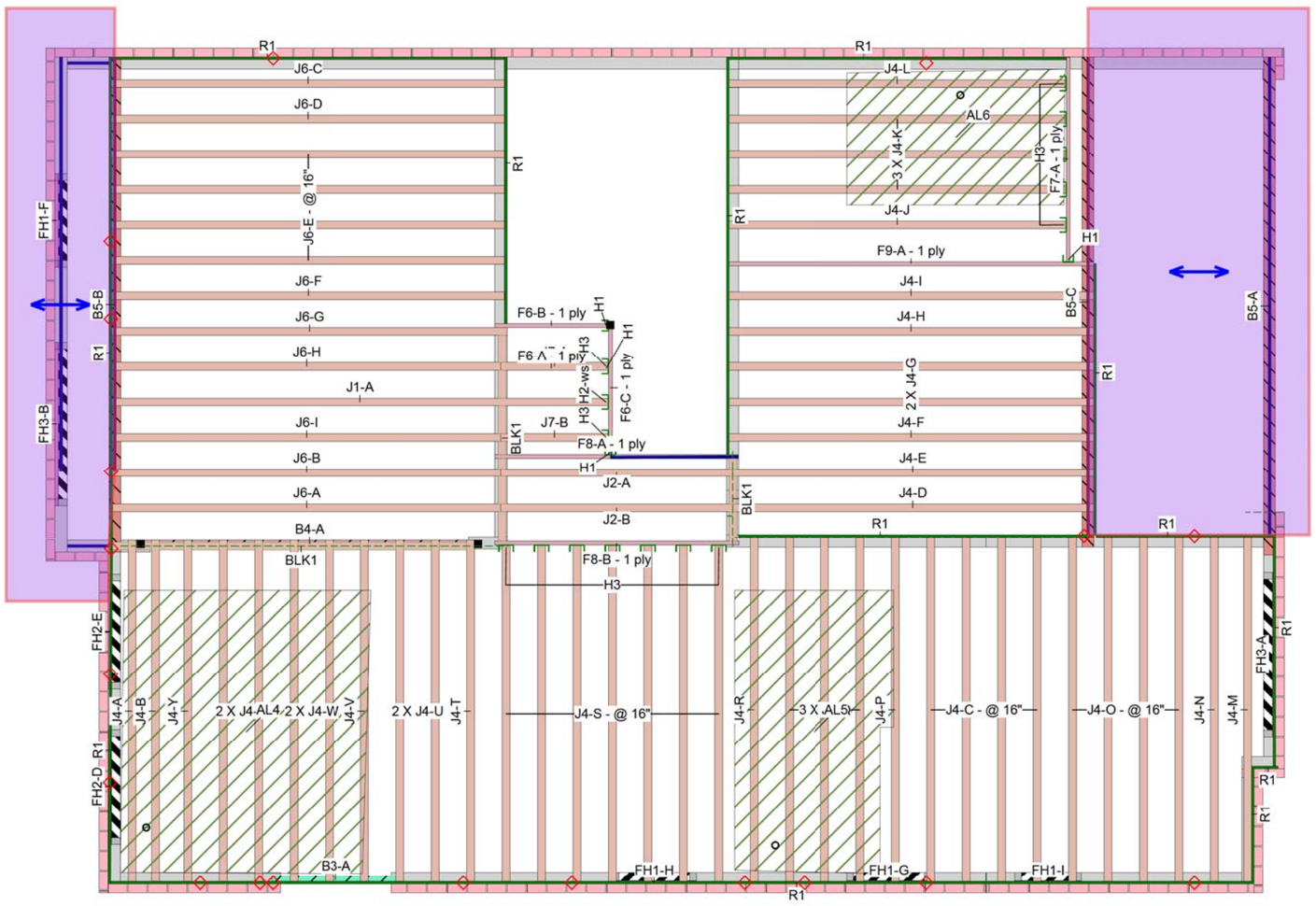
Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Second Floor



Second Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
B4	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	14-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875			1	14-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875			2	10-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			1	8-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			3	6-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J1	AJS 24	3.5	11.875			1	20-0-0
J6	AJS 24	3.5	11.875			12	16-0-0
J4	AJS 24	3.5	11.875			45	14-0-0
J2	AJS 24	3.5	11.875			2	10-0-0
J7	AJS 24	3.5	11.875			2	6-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 24	3.5	11.875	LinFt		Varies	20-0-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	4	HUS1.81/10			30 10dx1 1/2	10 16d
H2	1	MIU3.56/9 (Max)			16 10dx1 1/2	6 10dx1 1/2
H3	14	LF3511			12 10dx1 1/2	2 #8x1 1/4WS

JOB INFORMATION

Builder
GREENPARK

Project
ROUNDEL HOMES INC

Shipping
PINETREE 38-1-2
RICHMOND HILL,ON

Sales Rep
RALPH MIRIGELLO

Designer
W C

Plotted
June 08, 2021

Layout Name
PT38-1-2 STANDARD & DECK CONDITION

Job Path

DESIGN CRITERIA

Second Floor

Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012

Floor
Loads

Live	40
Dead	15

Decking

Decking	OSB
Thickness	5/8"
Fastener	Nailed & Glued

Vibration

Ceiling:	Gypsum 1/2"

Roof
Loads

Live	0
Dead	10.3
Snow	21

Decking

Decking	SPF Plywood

CCMC References
Boise - 12472-R , 12787-R
LP - 12412-R
Forex - 14056-R

Kott Inc.
3228 Moodie Dr, Ottawa
14 Anderson Blvd, Uxbridge Ontario
613-838-2775 /
905-642-4400

Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.

Legend

WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 24 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875

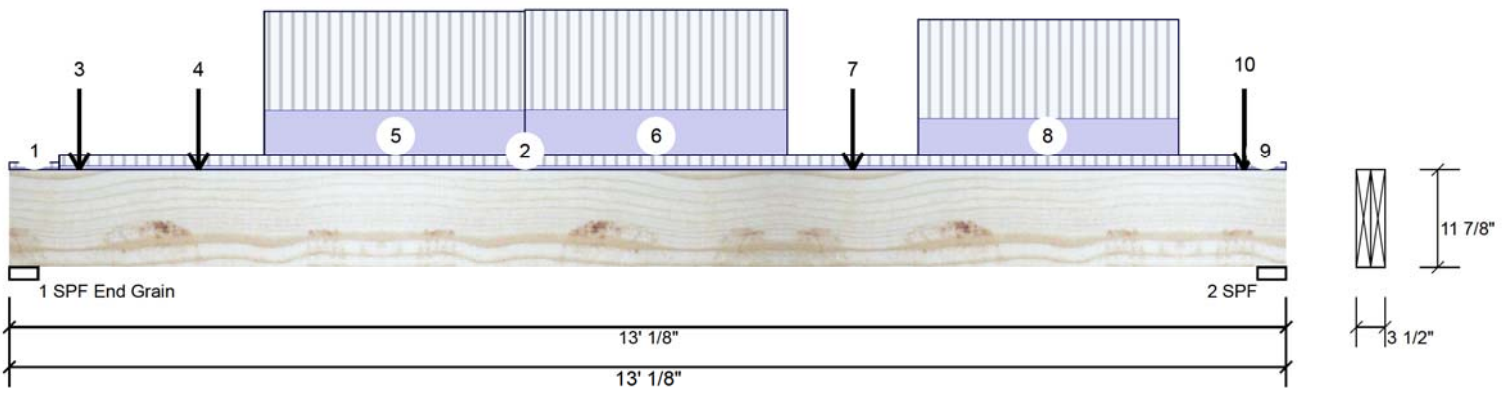
CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshuamanuva

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

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

B4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1781	850	0	0
2	Vertical	1733	773	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	41%	1062 / 2672	3734	L	1.25D+1.5L
2 - SPF	3.500"	Vert	47%	966 / 2599	3566	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11663 ft-lb	6'5 11/16"	34261 ft-lb	0.340 (34%)	1.25D+1.5L	L
Unbraced	11663 ft-lb	6'5 11/16"	34261 ft-lb	0.340 (34%)	1.25D+1.5L	L
Shear	3350 lb	1'3 3/8"	11596 lb	0.289 (29%)	1.25D+1.5L	L
Perm Defl in.	0.083 (L/1820)	6'5 11/16"	0.418 (L/360)	0.198 (20%)	D	Uniform
LL Defl inch	0.178 (L/847)	6'6 1/16"	0.314 (L/480)	0.567 (57%)	L	L
TL Defl inch	0.261 (L/578)	6'5 15/16"	0.628 (L/240)	0.415 (42%)	D+L	L

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.5.
2 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.5.
3 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
4 Girders are designed to be supported on the bottom edge only.
5 Multiple plies must be fastened together as per manufacturer's details.
6 Top loads must be supported equally by all plies.
7 Top must be continuously laterally braced.
8 Bottom must be laterally braced at bearings.
9 Lateral slenderness ratio based on full section width.

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

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

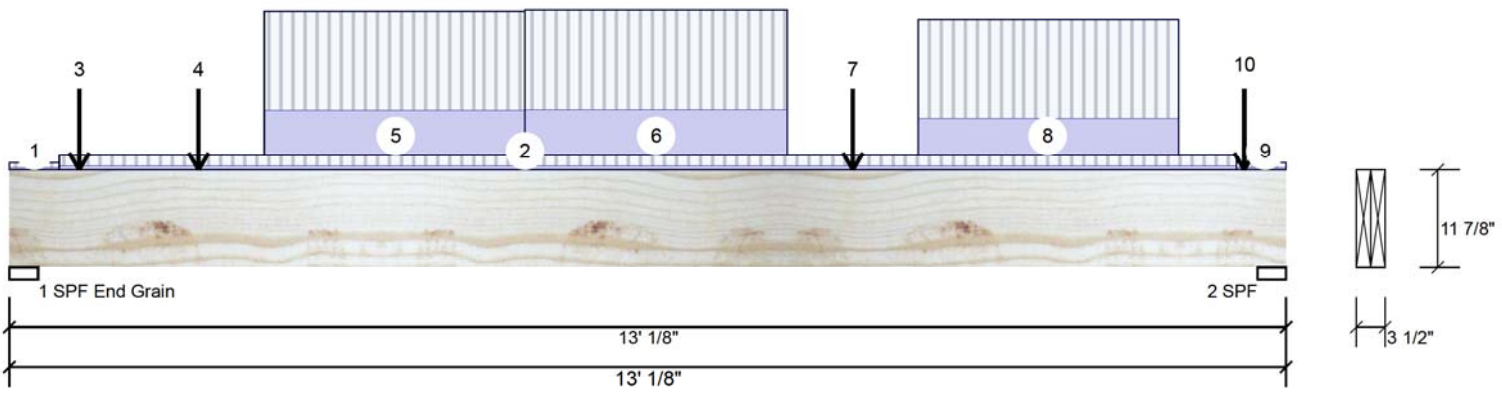
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

B4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tapered Start	0-0-0		Top	5 PLF	14 PLF	0 PLF	0 PLF	
	End	0-6-1			5 PLF	14 PLF	0 PLF	0 PLF	
2	Tapered Start	0-6-1		Top	11 PLF	29 PLF	0 PLF	0 PLF	
	End	12-6-1			11 PLF	29 PLF	0 PLF	0 PLF	
3	Point	0-8-8		Top	124 lb	268 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
4	Point	1-11-1		Top	150 lb	326 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
5	Part. Uniform	2-7-1 to 5-3-1		Top	117 PLF	256 PLF	0 PLF	0 PLF	
6	Part. Uniform	5-3-1 to 7-11-1		Top	118 PLF	259 PLF	0 PLF	0 PLF	
7	Point	8-7-1		Top	146 lb	346 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
8	Part. Uniform	9-3-1 to 11-11-1		Top	96 PLF	256 PLF	0 PLF	0 PLF	
9	Tapered Start	12-6-1		Top	5 PLF	14 PLF	0 PLF	0 PLF	
	End	13-0-2			5 PLF	14 PLF	0 PLF	0 PLF	
10	Point	12-7-1		Top	59 lb	156 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
	Self Weight				10 PLF				

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

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

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LICENSED PROFESSIONAL ENGINEER
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100528832
PROVINCE OF ONTARIO
June 28, 2021

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Lumber

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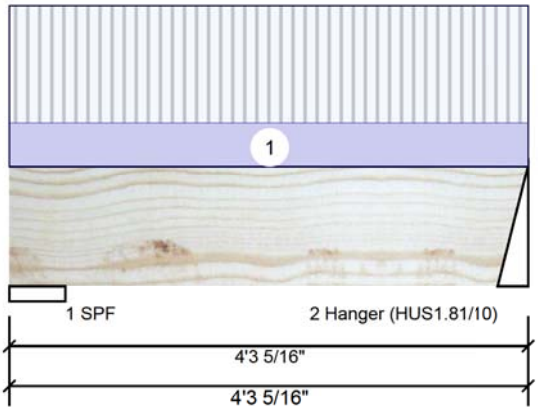
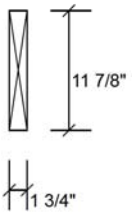
		Project #:	ROUNDEL HOMES INC

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	56	32	0	0
2	Vertical	51	29	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	2%	40 / 84	124	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	3%	36 / 76	112	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	94 ft-lb	2'2 7/8"	17130 ft-lb	0.005 (1%)	1.25D+1.5L	L
Unbraced	94 ft-lb	2'2 7/8"	17130 ft-lb	0.005 (1%)	1.25D+1.5L	L
Shear	50 lb	1'5 3/8"	5798 lb	0.009 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/173844)	2'2 15/16"	0.123 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/98197)	2'2 15/16"	0.092 (L/480)	0.005 (0%)	L	L
TL Defl inch	0.001 (L/62751)	2'2 15/16"	0.185 (L/240)	0.004 (0%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fill all hanger nailing holes.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must be laterally braced at bearings.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-3-5	0-7-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Notes

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Lumber

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

Handling & Installation

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CITY OF RICHMOND HILL
BUILDING DIVISION
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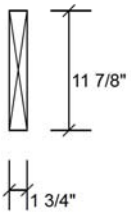
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F6-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	63	34	0	0
2	Vertical	63	33	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	2%	43 / 95	138	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	3%	42 / 94	136	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	114 ft-lb	2'2 7/8"	17130 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	114 ft-lb	2'2 7/8"	17130 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	59 lb	1'5 3/8"	5798 lb	0.010 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/150554)	2'2 15/16"	0.123 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.001 (L/79640)	2'2 15/16"	0.092 (L/480)	0.006 (1%)	L	L
TL Defl inch	0.001 (L/52087)	2'2 15/16"	0.185 (L/240)	0.005 (0%)	D+L	L

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

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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fill all hanger nailing holes.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	0-6-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-8 to 4-3-5	0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Notes

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Lumber

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

Handling & Installation

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Manufacturer Info

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APA: PR-L318

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Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
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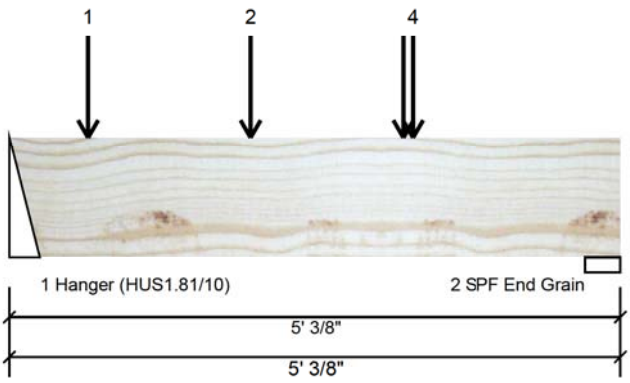
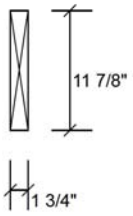
F6-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	112 (-74)	30	0	0
2	Vertical	86 (-47)	33	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	5%	37 / 168	206 (-84)	L	1.25D+1.5L (0.9D+1.5L)
2 - SPF End Grain	3.500"	Vert	4%	41 / 129	170 (-41)	L	1.25D+1.5L (0.9D+1.5L)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-196 ft-lb	1'11 3/4"	17130 ft-lb	0.011 (1%)	0.9D+1.5L	L
Pos Moment	247 ft-lb	3'2 13/16"	17130 ft-lb	0.014 (1%)	1.25D+1.5L	L
Unbraced	247 ft-lb	3'2 13/16"	17130 ft-lb	0.014 (1%)	1.25D+1.5L	L
Shear	204 lb	1'2 7/8"	5798 lb	0.035 (4%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/129099)	3'2 13/16"	0.154 (L/360)	0.003 (0%)	D	Uniform
LL Defl inch	0.002 (L/36033)	3' 1/8"	0.115 (L/480)	0.013 (1%)	L	L
TL Defl inch	0.002 (L/28325)	3'2 13/16"	0.231 (L/240)	0.008 (1%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fill all hanger nailing holes.
3 Girders are designed to be supported on the bottom edge only.
4 Tie-down connection required at bearing 1 for uplift 84 lb (Combination 0.9D+1.5L, Load Case L).
5 Tie-down connection required at bearing 2 for uplift 41 lb (Combination 0.9D+1.5L, Load Case L).
6 Top must be continuously laterally braced.
7 Bottom must have sheathing attached or be continuously braced.

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

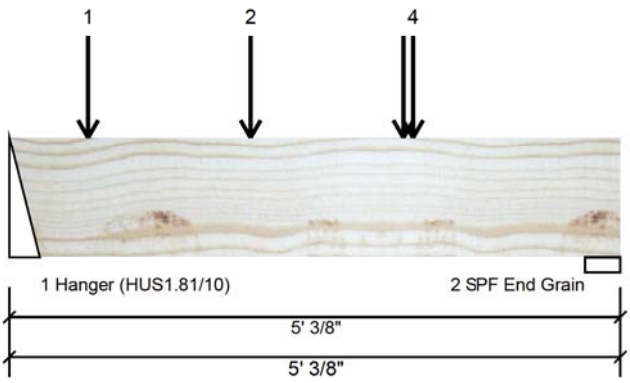
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

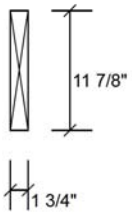
CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F6-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-7-12		Far Face	31 lb	82 lb	0 lb	0 lb	J7
2	Point	1-11-12		Far Face	-45 lb	-121 lb	0 lb	0 lb	J1
3	Point	3-2-13		Far Face	29 lb	51 lb	0 lb	0 lb	F6
4	Point	3-3-12		Far Face	24 lb	65 lb	0 lb	0 lb	J7
	Self Weight				5 PLF				

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

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June 28, 2021

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Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

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APA: PR-L318

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Per: joshua.nabua

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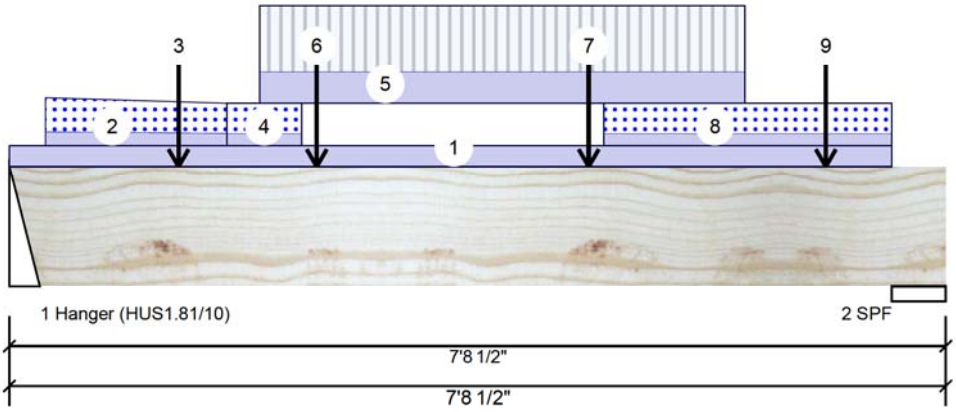
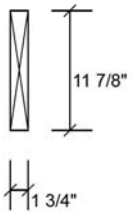
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	772	829	404	0
2	Vertical	841	866	400	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	67%	1037 / 1562	2598	L	1.25D+1.5L +S
2 - SPF	5.340"	Vert	48%	1082 / 1662	2744	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4942 ft-lb	3'9 7/16"	17130 ft-lb	0.288 (29%)	1.25D+1.5L +S	L
Unbraced	4942 ft-lb	3'9 7/16"	17130 ft-lb	0.288 (29%)	1.25D+1.5L +S	L
Shear	2473 lb	6'3 5/16"	5798 lb	0.426 (43%)	1.25D+1.5L +S	L
Perm Defl in.	0.038 (L/2256)	3'9 1/4"	0.238 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.046 (L/1848)	3'9 1/16"	0.178 (L/480)	0.260 (26%)	L+0.5S	L
TL Defl inch	0.084 (L/1016)	3'9 1/8"	0.357 (L/240)	0.236 (24%)	D+L+0.5S	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 7-3-3		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Tapered Start	0-3-9		Top	52 PLF	0 PLF	129 PLF	0 PLF	
	End	1-9-7			46 PLF	0 PLF	114 PLF	0 PLF	
3	Point	1-4-11		Far Face	131 lb	350 lb	0 lb	0 lb	J4
4	Part. Uniform	1-9-7 to 2-4-12		Top	46 PLF	0 PLF	114 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
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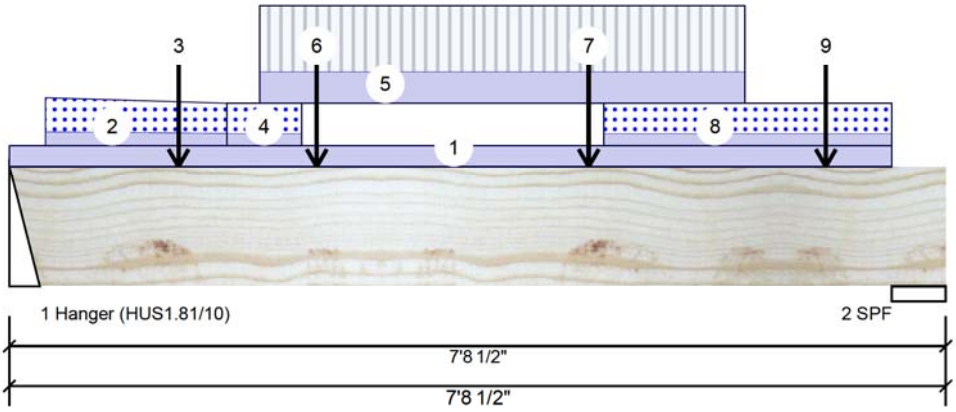
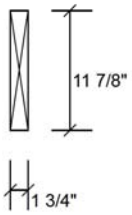
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	2-0-11 to 6-0-11		Far Face	119 PLF	250 PLF	0 PLF	0 PLF	
6	Point	2-6-4		Top	67 lb	0 lb	142 lb	0 lb	Header Column
	Bearing Length	0-5-8							
7	Point	4-9-4		Top	67 lb	0 lb	142 lb	0 lb	Header Column
	Bearing Length	0-5-8							
8	Part. Uniform	4-10-12 to 7-3-3		Top	46 PLF	0 PLF	114 PLF	0 PLF	
9	Point	6-8-11		Far Face	126 lb	263 lb	0 lb	0 lb	J4
	Self Weight				5 PLF				

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

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

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June 28, 2021

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 roation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

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613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
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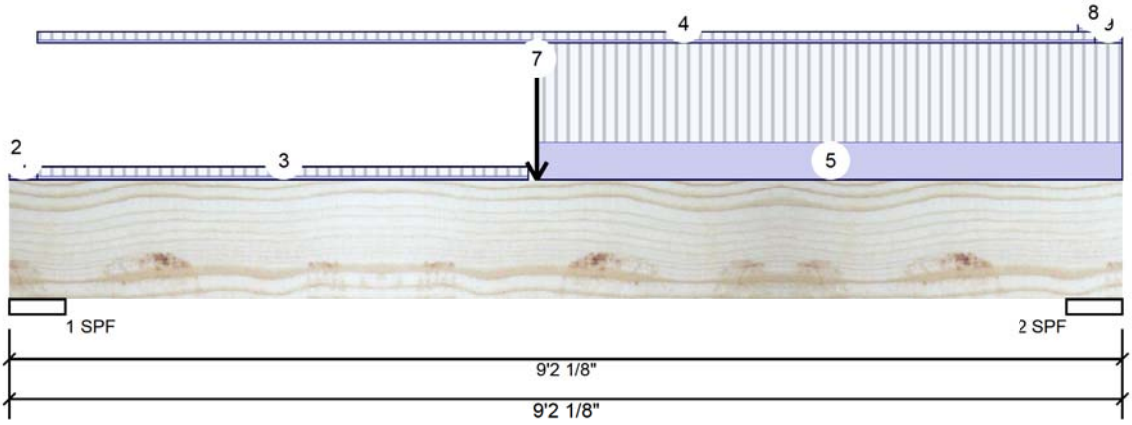
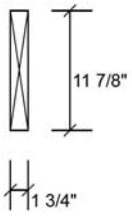
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1.2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	340 (-39)	144	0	0
2	Vertical	676 (-35)	272	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	12%	180 / 510	690	L	1.25D+1.5L
2 - SPF	5.500"	Vert	23%	341 / 1014	1354	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2261 ft-lb	5' 11/16"	17130 ft-lb	0.132 (13%)	1.25D+1.5L	L
Unbraced	2261 ft-lb	5' 11/16"	17130 ft-lb	0.132 (13%)	1.25D+1.5L	L
Shear	877 lb	7'8 3/4"	5798 lb	0.151 (15%)	1.25D+1.5L	L
Perm Defl in.	0.014 (L/7425)	4'9 7/8"	0.279 (L/360)	0.048 (5%)	D	Uniform
LL Defl inch	0.034 (L/2956)	4'9 11/16"	0.210 (L/480)	0.162 (16%)	L	L
TL Defl inch	0.048 (L/2114)	4'9 3/4"	0.419 (L/240)	0.114 (11%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must be laterally braced at a maximum of 4'9 15/16" o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-12	0-4-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-12	0-3-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 4-3-5	0-4-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-2-12 to 8-11-6	0-3-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	4-4-3 to 9-2-2		Top	57 PLF	150 PLF	0 PLF	0 PLF	
6	Point	4-4-3		Far Face	30 lb	112 lb	0 lb	0 lb	F6
7	Point	4-4-3		Far Face	0 lb	-74 lb	0 lb	0 lb	F6

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
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This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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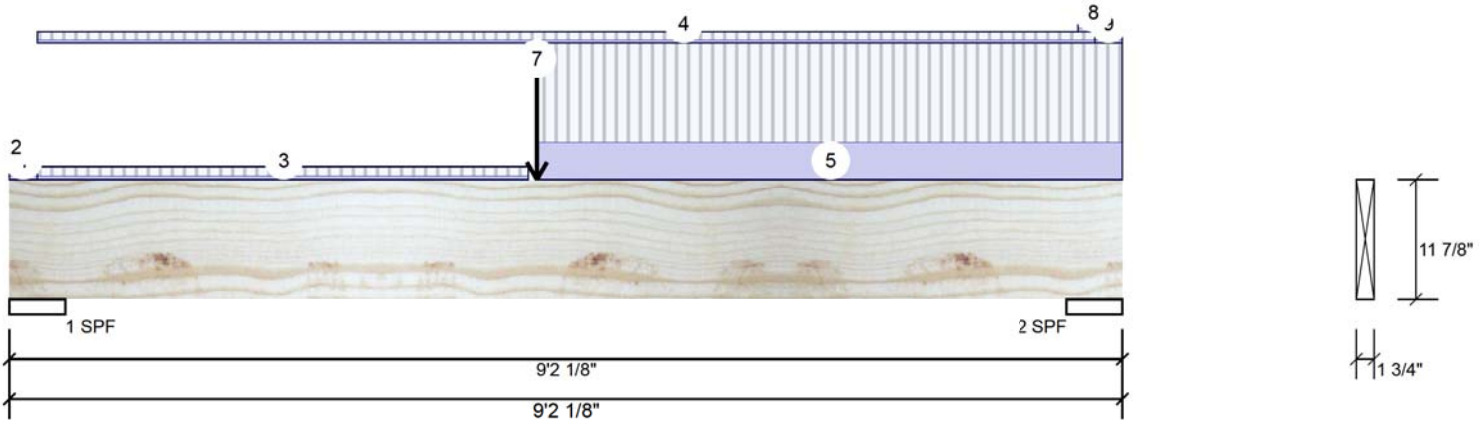
Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Tie-In	8-9-12 to 9-2-2	0-4-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Tie-In	8-11-6 to 9-2-2	0-3-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

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

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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

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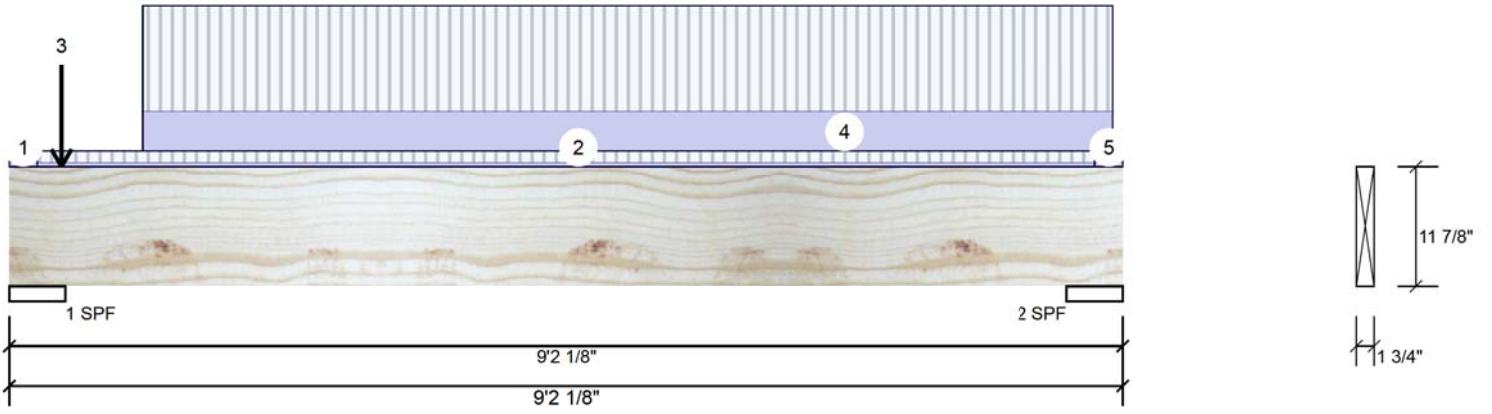

Member Information

Type:	Girder	Application:	Floor (Residential)
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Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1181	466	0	0
2	Vertical	1242	489	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	40%	582 / 1771	2353	L	1.25D+1.5L
2 - SPF	5.563"	Vert	41%	611 / 1863	2474	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4778 ft-lb	4'7 3/8"	17130 ft-lb	0.279 (28%)	1.25D+1.5L	L
Unbraced	4778 ft-lb	4'7 3/8"	17130 ft-lb	0.279 (28%)	1.25D+1.5L	L
Shear	2237 lb	1'5 3/8"	5798 lb	0.386 (39%)	1.25D+1.5L	L
Perm Defl in.	0.030 (L/3397)	4'7 3/16"	0.279 (L/360)	0.106 (11%)	D	Uniform
LL Defl inch	0.075 (L/1336)	4'7 3/16"	0.210 (L/480)	0.359 (36%)	L	L
TL Defl inch	0.105 (L/959)	4'7 3/16"	0.419 (L/240)	0.250 (25%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must have sheathing attached or be continuously braced.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-12	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-12 to 8-11-6	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-5-2		Near Face	67 lb	178 lb	0 lb	0 lb	J4
4	Part. Uniform	1-1-2 to 9-1-2		Near Face	94 PLF	250 PLF	0 PLF	0 PLF	
5	Tie-In	8-11-6 to 9-2-2	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

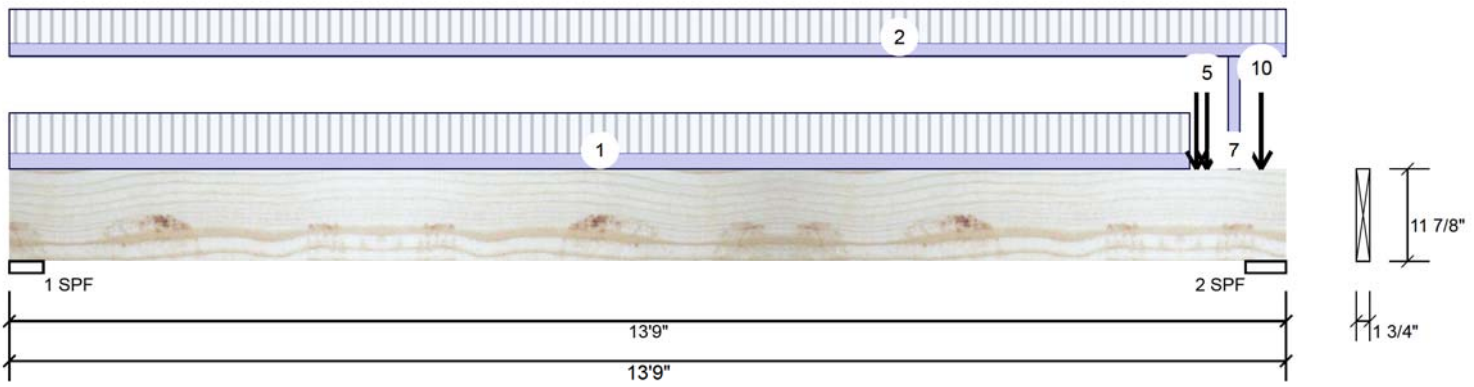
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	399	207	18	0
2	Vertical	1076	1077	449	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	Vert	19%	259 / 616	875	L	1.25D+1.5L +S
2 - SPF	5.250"	Vert	60%	1347 / 2063	3410	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3192 ft-lb	7'10 5/8"	17130 ft-lb	0.186 (19%)	1.25D+1.5L +S	L
Unbraced	3192 ft-lb	7'10 5/8"	17130 ft-lb	0.186 (19%)	1.25D+1.5L +S	L
Shear	3103 lb	12'3 7/8"	5798 lb	0.535 (54%)	1.25D+1.5L +S	L
Perm Defl in.	0.056 (L/2782)	7'2 13/16"	0.436 (L/360)	0.129 (13%)	D	Uniform
LL Defl inch	0.101 (L/1552)	7'1"	0.327 (L/480)	0.309 (31%)	L+0.5S	L
TL Defl inch	0.157 (L/996)	7'1 5/8"	0.654 (L/240)	0.241 (24%)	D+L+0.5S	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-8-9	0-8-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-9-0	0-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	12-9-7		Far Face	829 lb	772 lb	404 lb	0 lb	F7
4	Point	12-10-12		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

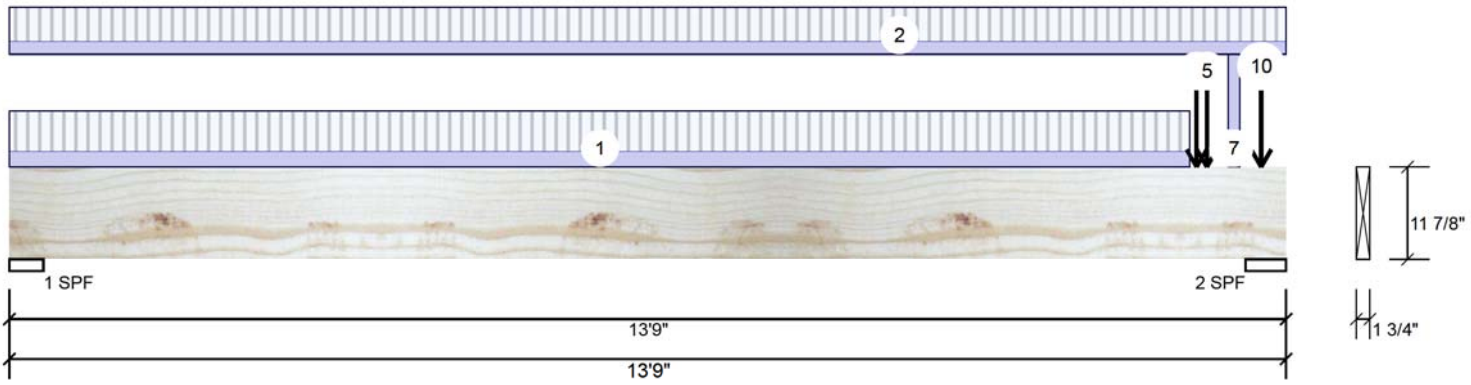
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-5-8							
5	Point	12-10-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Part. Uniform	13-1-8 to 13-1-9		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	13-1-9 to 13-3-1		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Point	13-5-12		Top	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
9	Point	13-5-12		Top	25 lb	0 lb	63 lb	0 lb	
	Bearing Length	0-5-8							
10	Point	13-5-12		Top	48 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				5 PLF				

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

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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Notes

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Forex
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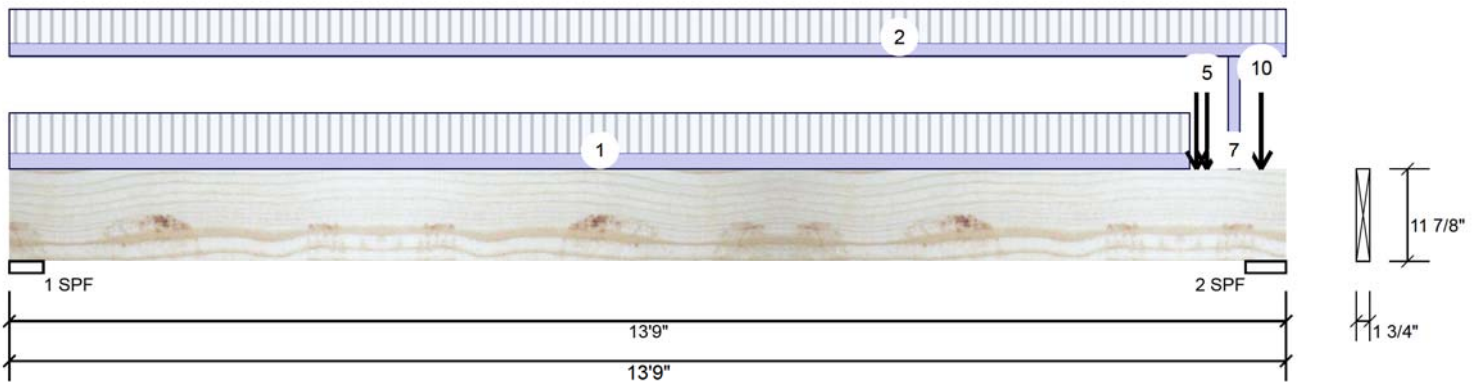
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
09/22/2022
RECEIVED
Per: joshua.nabua

Client:	GREENPARK	Date:	6/8/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-2 RICHMOND HILL,ON	Job Name:	PT38-1-2 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

Design Notes

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4	Point	12-10-12		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight

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Lumber

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Handling & Installation

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6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 3/25/2024

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

CITY OF RICHMOND HILL
BUILDING DIVISION
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Per: joshua.nabua

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F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

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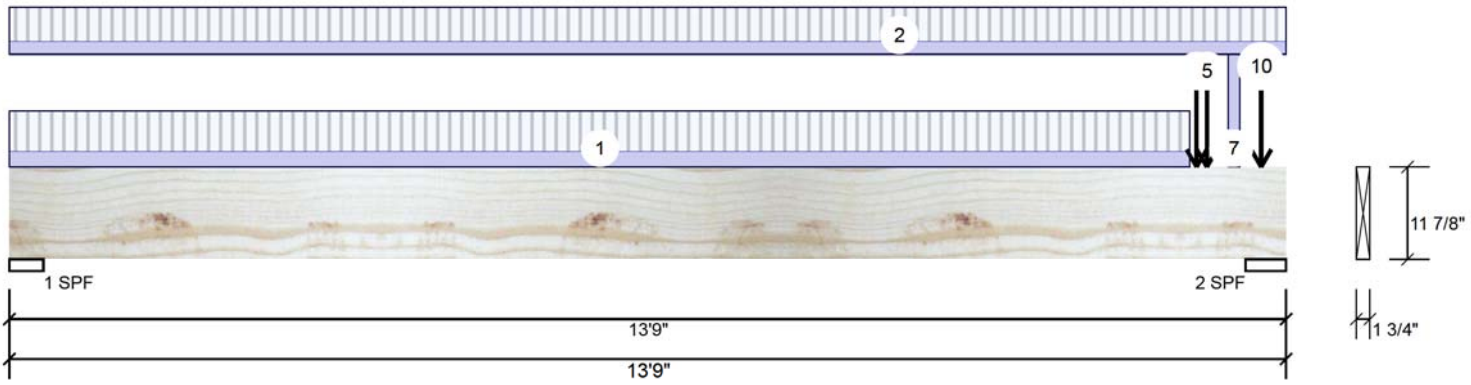

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-5-8							
5	Point	12-10-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Part. Uniform	13-1-8 to 13-1-9		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	13-1-9 to 13-3-1		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Point	13-5-12		Top	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
9	Point	13-5-12		Top	25 lb	0 lb	63 lb	0 lb	
	Bearing Length	0-5-8							
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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 2021

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Lumber

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