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 <u>only</u> 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 preauthorization.

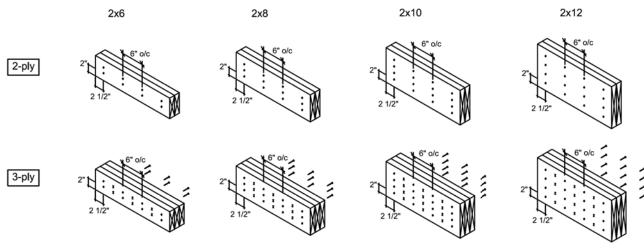


CITY OF RICHMOND HILL BUILDING DIVISION

09/22/2022

RECEIVED
Per: joshua.nabua

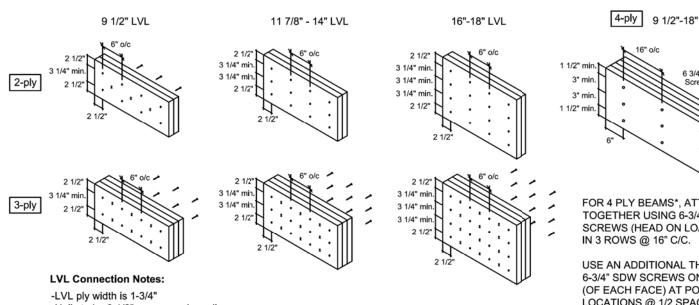
Conventional Connections



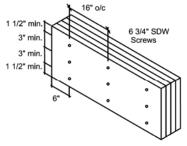
Conventional Connection Notes:

- -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



- -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)

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

KOT1

KOTTY INF. RICHMOND HILL 3228 Moodle Brive ISION Ottawa, ON K2H7V1/ZZ 613-838-2775

RECEIVED joshua.nabua

Last revised: February 19, 2021

FH1-NR1 2 X J6-B 2 X J10-U ₽--3 X J10-S-F9-A - 1 ply 2X8 FRAMING R1 R2 F8-A - 1 ply 2 X J5-E 2 X J6-D & F8-C - 1 ply 1-6r 1-6r 2 X J9-L F8-B - 1 ply 2 X J8-M 👼 2x8 FRAMING F4-C - 1 ply F4-A - 1 ply FH1-K

Ground LVL/LSI		2)								JOB INFORMATION
	_		Widtl	n De	pth	Qtv	Plies	Pcs	Length	Builder
F7	Forex	Allon	1.7		9.5	Qty	1 1103	1	14-0-0	GREENPARK
		00Fb LVL	1.7	"	0.0				1400	Project
F13	Forex		1.7	5 11.	875			1	14-0-0	ROUNDEL HOMES INC
		00Fb LVL			-					Shipping
F17	Forex	0055 11/1	1.7	5 11.	875	1	2	2	10-0-0	GLENROWAN 41-2-3
F10	Forex	00Fb LVL	1.7	E 44	875			1	8-0-0	RICHMOND HILL,ON
FIU		00Fb LVL	1.7	9 11.	0/5			,	8-0-0	Sales Rep
F9	Forex		1.7	5 11.	875			1	6-0-0	RALPH MIRIGELLO
		00Fb LVL								Designer
F8	Forex	continues:	1.7	5 11.	875			3	4-0-0	WC
		00Fb LVL								10.1.000
Joist (- T					Plotted
Label		otion	Widtl		pth	Qty	Plies	Pcs	Length	May 16, 2022
J2	AJS 24		3.		9.5			8	14-0-0	Layout Name
J1	AJS 24		3.		9.5			1	12-0-0	GR41-2-3 STANDARD
F6	AJS 24		3.	_	875			2	18-0-0	Job Path
F1	AJS 24		3.		875			2	16-0-0	
F5	AJS 24		3.		875			2	14-0-0	DESIGN CRITERIA
F4	AJS 24		3.		875			3	4-0-0	Ground Floor
J10	AJS 24		3.		875			14	18-0-0	Design Method
J9	AJS 24		3.		875			8	16-0-0	Building Code
J8	AJS 24		3.		875			14	14-0-0	Floor
J7	AJS 24		3.		875			4	12-0-0	Loads
J6	AJS 24		3.		875			6	10-0-0	Live
J5	AJS 24	-	3.		875			3	8-0-0	Dead
J4	AJS 24		3.	5 11.	875			1	6-0-0	Deflection Joist
Rim Bo				27					1	LL Span L/
Label			Widtl	_	pth	Qty	Plies	Pcs	Length	TL Span L/
R2		Rimboard	1.12	5	9.5			3	12-0-0	Deflection Flush Gir
		25 X 9.5	4.40		075			- 10	40.00	LL Span L/
R1	Plus 1.1	Rimboard	1.12	5 11.	875			13	12-0-0	
	11.875	20 /								TL Span L/
Blockin				-	- 1					Deflection Dropped
Label	~	otion	Widtl	De	pth	Qty	Plies	Pcs	Length	LL Span L/
	AJS 24		3.	_	875	LinFt	1	Varies	17-0-0	TL Span L/
Hanger										Deflection Header
iango.						Be	am/Girde	r Sur	ported	LL Span L/
						20			ember	TL Span L/
Label	Pcs	Descriptio	n	Skew	Slop	oe fa	asteners	fas	teners	Decking
H1		LF3511				-	12 10d	-	d 1/4WS	Decking
H2		HUS1.81/1	0				30 16d	_	0 16d	Thickness
								-		CCMC References

Builder GREENPARK Project ROUNDEL HOMES INC Shipping GLENROWAN 41-2-3 RICHMOND HILL,ON Sales Rep RALPH MIRIGELLO Designer WC **Plotted** May 16, 2022 **Layout Name** GR41-2-3 STANDARD & DECK CONDITION Job Path DESIGN CRITERIA **Ground Floor** Design Method LSD (Canada) NBCC 2015 / OBC 2012 **Building Code** Floor Loads Live 40 15 Dead **Deflection Joist** 480 LL Span L/ TL Span L/ 240 **Deflection Flush Girder** 480 LL Span L/ TL Span L/ 240 **Deflection Dropped Girder** 480 LL Span L/ TL Span L/ 240 **Deflection Header** LL Span L/ 480 TL Span L/ 240 Decking **OSB** Decking Thickness 5/8" **CCMC References** Boise - 12472-R , 12787-R

LP - 12412-R Forex - 14056-R

Kott Inc.

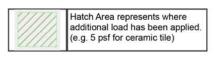
3228 Moodie Dr, Ottawa

613-838-2775 / 905-642-4400

14 Anderson Blvd, Uxbridge Contario

IM0721-008-R1 Page 3 of 35

- 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
- 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.



Ground Floor

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

Version 21.40.338 Powered by iStruct™ Dataset: 22042901.1447

This placement plan is to be used as an installation guide only. It is meant to be used in conjunction with the manufacturers installed with the head

Legend CITY OF RICHMOND HILL In Hanger Laber Denotes Web Stiffene PS Point Load Support Coad from Above / 2 0 Wall Opening Norbord Rimboard Plus 1,125 X 11.875 Norbord Rimboard Plus 1 125 X 9.5 AJS 24 95 hua nabua

Page 7 of 31



Client: Project: Address:

GREENPARK

Date:

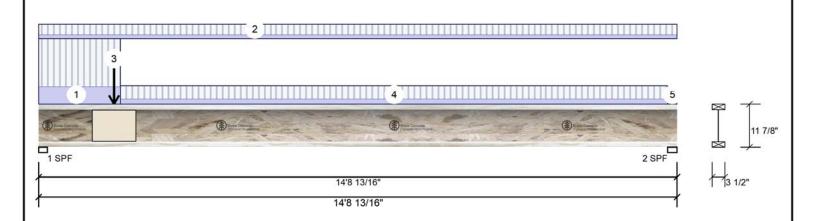
5/16/2022 Input by: WC

Job Name: GR41-2-3 STANDARD & DECK CONDITION

GLENROWAN 41-2-3 RICHMOND HILL, ON

Project #: ROUNDEL HOMES INC

F1-A **AJS 24** 11.875" - PASSED Level: Ground Floor



Member Infor	rmation			Unfactored Reactions UNPATTERNED Ib (Uplift)					
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	642	240	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	287	108	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					April November	94 (4350-5	509.0		
Floor Live:	40 PSF			Bear	rings and Fa	actored Rea	ctions		
Dead:	15 PSF			Bea	aring Length	Dir. Cap.	React D/L lb	Total Ld. Case	Ld. Comb.
				1 -	SPF 2.375"	Vert 75%	301 / 963	1263 L	1.25D+1.5L
	• EWU			2 -	SPF 2.625"	Vert 33%	135 / 431	566 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2393 ft-lb	6' 1/2"	8635 ft-lb	0.277 (28%)	1.25D+1.5L	L
Unbraced	2393 ft-lb	6' 1/2"	8635 ft-lb	0.277 (28%)	1.25D+1.5L	L
Shear	1242 lb	1 5/8"	2350 lb	0.529 (53%)	1.25D+1.5L	L
Perm Defl in.	0.045 (L/3866)	6'11 1/2"	0.482 (L/360)	0.093 (9%)	D	Uniform
LL Defl inch	0.120 (L/1449)	6'11 7/16"	0.361 (L/480)	0.331 (33%)	L	L
TL Defl inch	0.164 (L/1054)	6'11 1/2"	0.722 (L/240)	0.228 (23%)	D+L	L

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.

3 If shear 2' o.c.	s are designed to be supporting is not attached to the flange must be laterally		ENGINEERING IS AN INTEGR CONTAINS SP IN THE DESIG	AL PART OF				
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind
1	Tie-In	0-0-0 to 1-10-9	1-7-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Tie-In	0-0-0 to 14-8-13	0-4-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF

Far Face

Top

Top



May 20, 2022

READ ALL NOTES ON THIS PAGE AND ON THE GE ENP-2. THE NOTE PAGE F THIS DRAWING AS IT ONS AND CRITERIA USED COMPONENT.

Live	Snow	Wind	Comments
40 PSF	0 PSF	0 PSF	
40 PSF	0 PSF	0 PSF	
353 lb	0 lb	0 lb	F4
40 PSF	0 PSF	0 PSF	

0 PSF

Notes

5

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.

Point

Tie-In

Tie-In

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

Handling & Installation

1-8-13

1-10-9 to 14-6-4 0-5-10

14-6-4 to 14-8-13 0-2-2

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

132 lb

15 PSF

15 PSF

40 PSF

- 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

This design is valid until 5/24/2024

Manufacturer Info

0 PSF

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

(800) 232-0788 www.bc.com CCMC: 12787



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isDesign

Client: Project:

GREENPARK

Address: GLENROWAN 41-2-3

RICHMOND HILL, ON

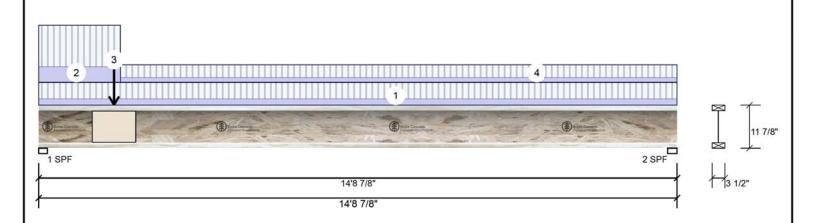
5/16/2022

Project #:

Input by: WC

Job Name: GR41-2-3 STANDARD & DECK CONDITION ROUNDEL HOMES INC

F1-B **AJS 24** 11.875" - PASSED Level: Ground Floor



Member Infor	mation			Unfactored Reactions UNPATTERNED Ib (Uplift)					
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	729	274	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	387	145	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					Mary Control	54 (M3555	500.0		
Floor Live:	40 PSF			Bear	rings and F	actored Rea	ctions		
Dead:	15 PSF			Bea	aring Length	Dir. Cap.	React D/L lb	Total Ld. Case	Ld. Comb.
				1 -	SPF 2.375"	Vert 85%	342 / 1094	1436 L	1.25D+1.5L
	• CP14			2 -	SPF 2.625"	Vert 44%	181 / 581	762 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3043 ft-lb	6'5 5/16"	8635 ft-lb	0.352 (35%)	1.25D+1.5L	L
Unbraced	3043 ft-lb	6'5 5/16"	8635 ft-lb	0.352 (35%)	1.25D+1.5L	L
Shear	1411 lb	1 5/8"	2350 lb	0.600 (60%)	1.25D+1.5L	L
Perm Defl in.	0.057 (L/3036)	7' 11/16"	0.482 (L/360)	0.119 (12%)	D	Uniform
LL Defl inch	0.152 (L/1139)	7' 11/16"	0.361 (L/480)	0.421 (42%)	L	L
TL Defl inch	0.209 (L/828)	7' 11/16"	0.722 (L/240)	0.290 (29%)	D+L	L

Design Notes

may als 2 Girders 3 If sheat 2' o.c.	support to prevent laters so be required at the inter are designed to be supp thing is not attached to the flange must be laterally	rior bearings by the but orted on the bottom e e top flange, top flang	ilding code. dge only. e must be later	ally braced a			ENGINEERING IS AN INTEGRA	NOTE PAGE AL PART OF ECIFICATION	S PAGE AND ON THE EENP-2. THE NOTE F THIS DRAWING AS IT NS AND CRITERIA US OMPONENT.	PAGE T
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 14-8-14	0-8-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF		

10 Tie-In 0-0-0 to 1-10-9 1-7-10 Тор 15 PSF 40 PSF 0 PSF 0 PSF Point 1-8-13 Near Face 129 lb 343 lb 0 lb 0 lb F4 Tie-In 1-10-9 to 14-8-14 0-6-0 Top 15 PSF 40 PSF 0 PSF 0 PSF

Notes

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

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

Handling & Installation

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

CCMC: 12787

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

PROFESSIONAL

I.MATIJEVIC 100528832

NCE OF

May 20, 2022

(800) 232-0788 www.bc.com



joshua.nabua

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Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

5/16/2022 Date:

WC Input by:

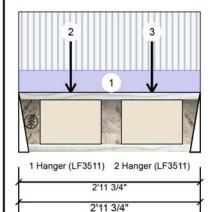
Project #:

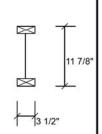
GR41-2-3 STANDARD & DECK CONDITION Job Name:

ROUNDEL HOMES INC

AJS 24 11.875" - PASSED F4-A

Level: Ground Floor





Wind

0

0

Member Information Type: 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 40 PSF Floor Live: 15 PSF Dead:

Anal	ysis	Resu	lts
------	------	------	-----

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	487 ft-lb	1'2 15/16"	8635 ft-lb	0.056 (6%)	1.25D+1.5L	L
Unbraced	487 ft-lb	1'2 15/16"	8635 ft-lb	0.056 (6%)	1.25D+1.5L	L
Shear	687 lb	2'10 1/2"	2350 lb	0.292 (29%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/20458)	1'4 13/16"	0.092 (L/360)	0.018 (2%)	D	Uniform
LL Defl inch	0.004 (L/7664)	1'4 13/16"	0.069 (L/480)	0.063 (6%)	L	L
TL Defl inch	0.006 (L/5575)	1'4 13/16"	0.139 (L/240)	0.043 (4%)	D+L	L

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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 5 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

Brg	Direction	Live	Dead	Snow	
1	Vertical	343	129	0	
١ ۾	Montinal	252	422	0	

Unfactored Reactions UNPATTERNED Ib (Uplift)

Bearings and Factored Reactions											
Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.				
1 - Hanger	2.000"	Vert	42%	161 / 515	676	L	1.25D+1.5L				
2 - Hanger	2.000"	Vert	43%	165 / 529	694	L	1.25D+1.5L				



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 2-11-12	0-10-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-10-4		Far Face	112 lb	299 lb	0 lb	0 lb	J8
3	Point	2-2-4		Far Face	109 lb	291 lb	0 lb	0 lb	J8

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.

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

Handling & Installation

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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 poorling.

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

(800) 232-0788 www.bc.com CCMC: 12787

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400



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isDesign

Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

Date: Input by:

Project #:

WC

GR41-2-3 STANDARD & DECK CONDITION Job Name: ROUNDEL HOMES INC

Unfactored Reactions UNPATTERNED Ib (Uplift)

Live

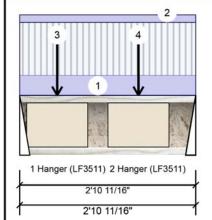
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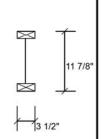
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AJS 24 11.875" - PASSED F4-B

Level: Ground Floor

5/16/2022





Wind

0

0

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: 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	1	

PSF	Bearings and Factored Reactions
5 PSF	Bearing Length Dir. Cap. React D

Brg

1

2

Direction

Vertical

Vertical

D/L lb Total Ld. Case Ld. Comb. 323 / 636 2.000" Vert 60% 960 L 1.25D+1.5L Hanger

Dead

259

223

Snow

0

0

2 -2.000" Vert 51% 278 / 549 827 L 1.25D+1.5L Hanger

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
Moment	659 ft-lb	1'11 3/8"	8635 ft-lb	0.076 (8%)	1.25D+1.5L	L	
Unbraced	659 ft-lb	1'11 3/8"	8635 ft-lb	0.076 (8%)	1.25D+1.5L	L	
Shear	952 lb	1 1/4"	2350 lb	0.405 (41%)	1.25D+1.5L	L	
Perm Defl in.	0.003 (L/10825)	1'11 3/8"	0.089 (L/360)	0.033 (3%)	D	Uniform	
LL Defl inch	0.005 (L/6642)	1'11 3/8"	0.067 (L/480)	0.072 (7%)	L	L	
TL Defl inch	0.008 (L/4116)	1'11 3/8"	0.134 (L/240)	0.058 (6%)	D+L	L	

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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum
- 5 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at



May 20, 2022

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 2-10-11	0-10-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-10-11		Тор	5 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-7-6		Near Face	198 lb	318 lb	0 lb	0 lb	J9
4	Point	1-11-6		Near Face	230 lb	368 lb	0 lb	0 lb	J9

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.

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

Handling & Installation

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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 populing.

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

(800) 232-0788 www.bc.com CCMC: 12787

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400



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Client:

GREENPARK Project:

GLENROWAN 41-2-3 Address:

RICHMOND HILL,ON

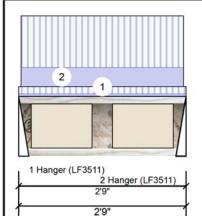
Date: 5/16/2022 Input by: WC

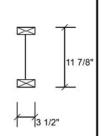
Project #:

Job Name: GR41-2-3 STANDARD & DECK CONDITION ROUNDEL HOMES INC

11.875" - PASSED F4-C **AJS 24**

Level: Ground Floor





nember inform	ation		
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		

Analysis	Results

Mambau Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	344 ft-lb	1'4 1/2"	8635 ft-lb	0.040 (4%)	1.25D+1.5L	L
Unbraced	344 ft-lb	1'4 1/2"	8635 ft-lb	0.040 (4%)	1.25D+1.5L	L
Shear	542 lb	1 1/4"	2350 lb	0.231 (23%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/27726)	1'4 1/2"	0.085 (L/360)	0.013 (1%)	D	Uniform
LL Defl inch	0.003 (L/10317)	1'4 1/2"	0.063 (L/480)	0.047 (5%)	L	L
TL Defl inch	0.004 (L/7519)	1'4 1/2"	0.127 (L/240)	0.032 (3%)	D+L	L

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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum
- 5 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

Unfactored Reactions	UNPATTERNED Ib	(Uplift)
----------------------	----------------	----------

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	291	108	0	0
2	Vertical	290	108	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	36%	135 / 437	572	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	35%	135 / 435	570	L	1.25D+1.5L



May 20, 2022

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 2-9-0	0-7-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-7 to 2-8-7		Far Face	71 PLF	191 PLF	0 PLF	0 PLF	

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.

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

Handling & Installation

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

(800) 232-0788 www.bc.com CCMC: 12787





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Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

5/16/2022

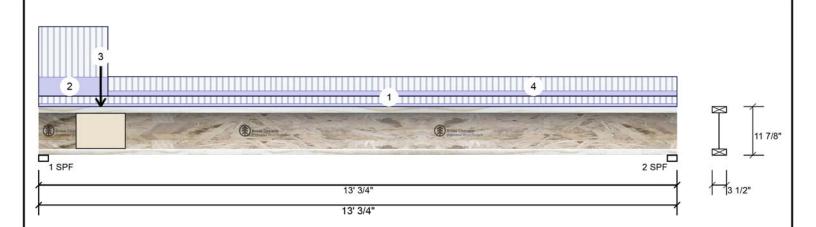
Input by: WC

Project #:

Job Name: GR41-2-3 STANDARD & DECK CONDITION

ROUNDEL HOMES INC

F5-A **AJS 24** 11.875" - PASSED Level: Ground Floor



Member Infor	mation			Unfa	ctored Rea	actions UN	PATTERNED I	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	498	186	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	203	76	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked	1					
Importance:	Normal - II	Vibration:	Not Checked	1					
General Load					10 ¹⁷ 50075-	04 004000	5.50		
Floor Live:	40 PSF			Bear	ings and F	actored Re	actions		
Dead:	15 PSF			Bea	ring Length	Dir. Ca	p. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - 8	SPF 2.375"	Vert 58	% 232 / 748	980 L	1.25D+1.5L
				2 - 5	SPF 2.375"	Vert 24	% 95 / 304	399 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1461 ft-lb	5'5 5/8"	8635 ft-lb	0.169 (17%)	1.25D+1.5L	L
Unbraced	1461 ft-lb	5'5 5/8"	8635 ft-lb	0.169 (17%)	1.25D+1.5L	L
Shear	961 lb	1 5/8"	2350 lb	0.409 (41%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/6873)	6'2 1/8"	0.426 (L/360)	0.052 (5%)	D	Uniform
LL Defl inch	0.060 (L/2571)	6'2 1/8"	0.320 (L/480)	0.187 (19%)	L	L
TL Defl inch	0.082 (L/1871)	6'2 1/8"	0.640 (L/240)	0.128 (13%)	D+L	L

Des

- 1 1
- 2 0
- 3 1
- 4 Bottom flange must be laterally braced at a maximum of 11'9 5/8" o.c.

L Defl inch 0.060 (L/2	2571) 6'2 1/8"	0.320 (L/480) 0.187 (19%) L	L	(3)
L Defl inch 0.082 (L/1	1871) 6'2 1/8"	0.640 (L/240) 0.128 (13%) D+	L L	WINCE OF ONTA
sign Notes				May 20, 2022
		ent and rotation at the end bearings by the building code.	gs. Lateral support	READ ALL NOTES ON THIS PAGE AND ON THE
Girders are designed t	o be supported on	the bottom edge only.		ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE
If sheathing is not attact 2' o.c.	ched to the top flan	ge, top flange must be laterally br	aced at maximum	IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.
		5 1 4 10 E 10 II		IN THE DESIGN OF THIS COMPONENT.

L	4 Dottom hange	must be laterally bi	aced at a maximum	01119 0/0 0.0.	8					
ĺ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
I	1	Tie-In	0-0-0 to 13-0-12	0-2-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
I	2	Tie-In	0-0-0 to 1-4-15	1-6-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
I	3	Point	1-3-3		Near Face	108 lb	291 lb	0 lb	0 lb	F4
I	4	Tie-In	1-4-15 to 13-0-12	0-5-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

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

Handling & Installation

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

PROFESSIONAL

I.MATIJEVIC 100528832

(800) 232-0788 www.bc.com CCMC: 12787



joshua.nabua

Page 13 of 31

isDesign

Project: Address:

Client:

GREENPARK

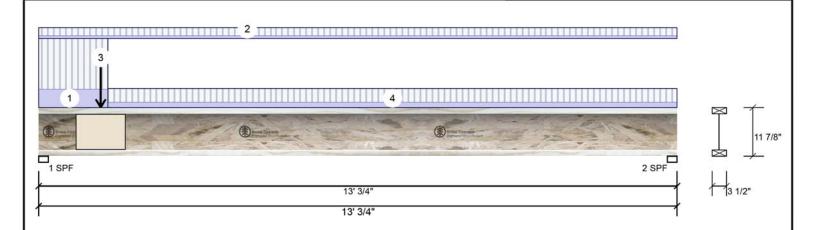
GLENROWAN 41-2-3 RICHMOND HILL,ON Date: 5/16/2022

Project #:

Input by: WC

Job Name: GR41-2-3 STANDARD & DECK CONDITION ROUNDEL HOMES INC

F5-B **AJS 24** 11.875" - PASSED Level: Ground Floor



nation			Unfa	actored Rea	actions UNP	ATTERNED I	b (Uplift)	
Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
1	Design Method:	LSD	1	Vertical	497	186	0	0
Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	203	76	0	0
480	Load Sharing:	No						
240	Deck:	Not Checked						
Normal - II	Vibration:	Not Checked						
				Total Scotter	Day 100-00-00	255.0		
40 PSF			Bear	rings and Fa	actored Rea	ctions		
15 PSF			Bea	aring Length	Dir. Cap.	React D/L lb	Total Ld. Case	Ld. Comb.
			1 - 3	SPF 2.375"	Vert 58%	232 / 746	978 L	1.25D+1.5L
1.2			2 - 3	SPF 2.375"	Vert 24%	95 / 304	399 L	1.25D+1.5L
	Girder 1 Dry 480 240 Normal - II	Girder Application: Design Method: Dry Building Code: 480 Load Sharing: 240 Deck: Normal - II Vibration: 40 PSF 15 PSF	Girder Application: Floor (Residential) 1 Design Method: LSD Dry Building Code: NBCC 2015 / OBC 2012 480 Load Sharing: No 240 Deck: Not Checked Normal - II Vibration: Not Checked 40 PSF 15 PSF	Application: Floor (Residential) Brg	Girder Application: Floor (Residential) Design Method: LSD Building Code: NBCC 2015 / OBC 2012 Load Sharing: No Deck: Not Checked Vibration: Not Checked Brg Direction 1 Vertical 2 Vertical 4 Vertical 5 Vertical Pearings and Final English 1 - SPF 2.375" 2 - SPF 2.375"	Application: Floor (Residential) Brg Direction Live	Application: Floor (Residential) Brg Direction Live Dead	Application: Floor (Residential) Brg Direction Live Dead Snow

Analysis Results

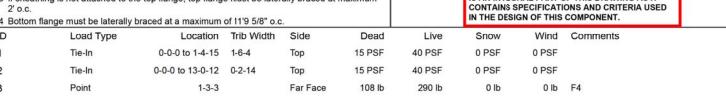
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1460 ft-lb	5'5 5/8"	8635 ft-lb	0.169 (17%)	1.25D+1.5L	L
Unbraced	1460 ft-lb	5'5 5/8"	8635 ft-lb	0.169 (17%)	1.25D+1.5L	L
Shear	960 lb	1 5/8"	2350 lb	0.408 (41%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/6874)	6'2 1/8"	0.426 (L/360)	0.052 (5%)	D	Uniform
LL Defl inch	0.060 (L/2573)	6'2 1/8"	0.320 (L/480)	0.187 (19%)	L	L
TL Defl inch	0.082 (L/1872)	6'2 1/8"	0.640 (L/240)	0.128 (13%)	D+L	L

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 a 3 If sheathi 2' o.c.	be required at the interior designed to be supporting is not attached to the ange must be laterally be	orted on the bottom e e top flange, top flang	dge only. e must be later		at maximum		ENGINEERIN IS AN INTEG CONTAINS S	RAL PART OF	HIS PAGE AND ON THE GE ENP-2. THE NOTE PA OF THIS DRAWING AS IT ONS AND CRITERIA USE COMPONENT.	
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 1-4-15	1-6-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF		

Тор



15 PSF

40 PSF

Notes

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

Tie-In

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

Handling & Installation

1-4-15 to 13-0-12 0-5-2

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

0 PSF

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

0 PSF

PROFESSIONA

I.MATIJEVIC 100528832

NCE OF

May 20, 2022

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Page 14 of 3



Client: Address:

GREENPARK

Project:

GLENROWAN 41-2-3 RICHMOND HILL, ON

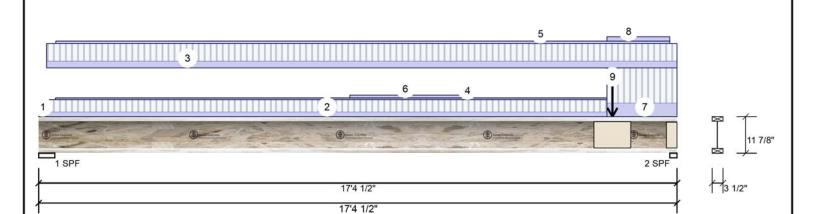
5/16/2022 Date:

WC Input by:

GR41-2-3 STANDARD & DECK CONDITION Job Name:

Project #: ROUNDEL HOMES INC Level: Ground Floor

AJS 24 11.875" - PASSED F6-A



Member Information Unfactored Reactions UNPATTERNED Ib (Uplift) Type: Application: Floor (Residential) Brg Direction Live Dead Snow Wind Plies: 1 Design Method: LSD 502 263 0 1 Vertical 0 Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 864 478 0 0 2 Vertical Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Vibration: Not Checked General Load **Bearings and Factored Reactions** 40 PSF Floor Live: 15 PSF Dead: Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 5.250" Vert 57% 329 / 753 1082 L 1.25D+1.5L 598 / 1295 1.25D+1.5L 2 - SPF 2.375" Vert 83% 1893 L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4902 ft-lb	9'7 1/16"	8635 ft-lb	0.568 (57%)	1.25D+1.5L	L
Unbraced	4902 ft-lb	9'7 1/16"	8635 ft-lb	0.568 (57%)	1.25D+1.5L	L
Shear	1868 lb	17'2 7/8"	2350 lb	0.795 (79%)	1.25D+1.5L	L
Perm Defl in.	0.158 (L/1281)	9'1 3/16"	0.562 (L/360)	0.281 (28%)	D	Uniform
LL Defl inch	0.288 (L/702)	9' 5/8"	0.422 (L/480)	0.684 (68%)	L	L
TL Defl inch	0.446 (L/454)	9' 13/16"	0.843 (L/240)	0.529 (53%)	D+L	L

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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 15'7 7/16" o.c.
- 5 Web stiffeners required at Bearing 2.



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	0-6-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-10 to 15-5-11	0-6-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 17-4-8	0-9-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-5-8 to 15-5-11		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-5-9 to 17-2-2		Тор	4 PLF	0 PLF	0 PLF	0 PLF	
6	Part. Uniform	8-5-10 to 11-5-10		Тор	6 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

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

Handling & Installation

- Handling & Installation

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

(800) 232-0788 www.bc.com CCMC: 12787



Page 15 of 31



Client: Address:

Project:

GREENPARK

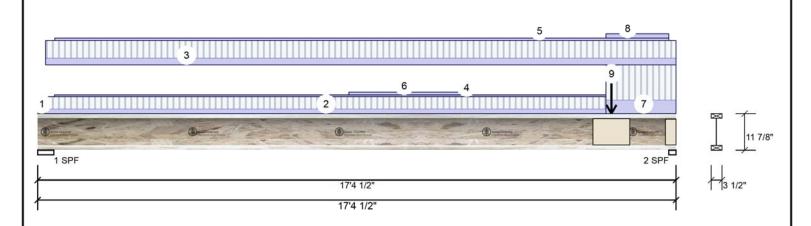
GLENROWAN 41-2-3 RICHMOND HILL, ON 5/16/2022

Project #:

Input by: WC

Job Name: GR41-2-3 STANDARD & DECK CONDITION ROUNDEL HOMES INC

F6-A **AJS 24** 11.875" - PASSED Level: Ground Floor



Continued	from	page '	1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	15-5-11 to 17-4-8	1-7-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
8	Part. Uniform	15-5-11 to 17-2-2		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
9	Point	15-7-7		Far Face	223 lb	366 lb	0 lb	0 lb	F4



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.

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

Handling & Installation

- Handling & Installation

 1. Moist fingage must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

CCMC: 12787

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702 (800) 232-0788 www.bc.com

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

CSD BUILD joshua.nabua

Page 16 of 31

isDesign

Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

Date: 5/16/2022 Input by:

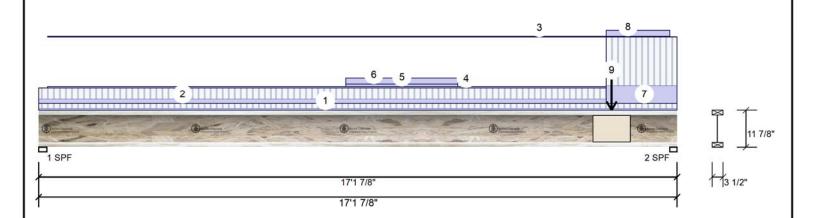
WC

Job Name: GR41-2-3 STANDARD & DECK CONDITION

RICHMOND HILL,ON

Project #: ROUNDEL HOMES INC Level: Ground Floor

F6-B **AJS 24** 11.875" - PASSED



Member Info	rmation			Unfa	actored Rea	actions UN	PATTERNED	lb (Upli	ft)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	1	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	231	136		0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	656	390		0	0
Deflection LL:	480	Load Sharing:	No	-						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal - II	Vibration:	Not Checked							
General Load							200.0			
Floor Live:	40 PSF			Bear	rings and F	actored Re	actions			
Dead:	15 PSF			Bea	aring Length	Dir. Ca	p. React D/L lb	Total	Ld. Case	Ld. Comb.
				1-3	SPF 2.625"	Vert 30	170 / 347	517	L	1.25D+1.5L
				2-1	SPF 2.375"	Vert 87	% 488 / 985	1472	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2766 ft-lb	10'6"	8635 ft-lb	0.320 (32%)	1.25D+1.5L	L
Unbraced	2766 ft-lb	10'6"	8635 ft-lb	0.320 (32%)	1.25D+1.5L	L
Shear	1454 lb	17' 1/4"	2350 lb	0.619 (62%)	1.25D+1.5L	L
Perm Defl in.	0.098 (L/2068)	9'2 1/8"	0.562 (L/360)	0.174 (17%)	D	Uniform
LL Defl inch	0.154 (L/1313)	9'1 3/4"	0.422 (L/480)	0.366 (37%)	L	L
TL Defl inch	0.252 (L/803)	9'1 7/8"	0.843 (L/240)	0.299 (30%)	D+L	L

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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.

4 Bottom flange must be laterally braced at a maximum of 15'4 13/16" 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 17-1-14	0-1-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-3-1	0-4-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-14 to 16-11-8		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-14 to 15-3-1		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	8-3-0 to 11-3-0		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
6	Part. Uniform	8-3-0 to 11-3-0		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	15-3-1 to 17-1-14	1-7-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

Continued on page 2...

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.

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

 1. Moist finages must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702

(800) 232-0788 www.bc.com CCMC: 12787



Page 17 of 31



Client: Project: Address:

GREENPARK

RICHMOND HILL, ON

GLENROWAN 41-2-3

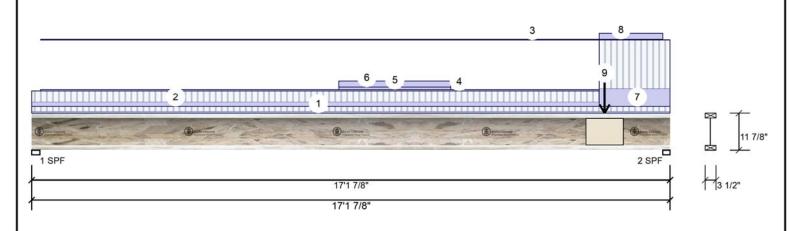
5/16/2022 Input by:

Project #:

WC

Job Name: GR41-2-3 STANDARD & DECK CONDITION ROUNDEL HOMES INC

F6-B **AJS 24** 11.875" - PASSED Level: Ground Floor



Continued	from	page 1	1
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Part. Uniform	15-3-1 to 16-11-8		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
9	Point	15-4-13		Near Face	259 lb	424 lb	0 lb	0 lb	F4



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.

Notes

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

Handling & Installation

- Handling & Installation

 1. Moist fingage must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. 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

This design is valid until 5/24/2024

Manufacturer Info

www.bc.com CCMC: 12787

Boise Cascade Wood Products 1111 W. Jefferson St. Boise, ID 83702 (800) 232-0788

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400



Page 1 of 37



Project: Address:

Client: GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

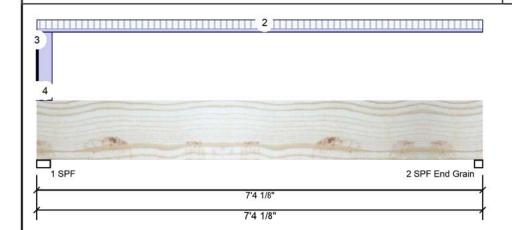
7/5/2021

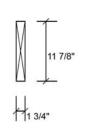
WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

F10-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





Member Information Type: 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 40 PSF Floor Live:

Location Allowed

3'8 9/16" 17130 ft-lb

3'8 9/16" 17130 ft-lb

6'2 5/8" 5798 lb

Capacity

0.008 (1%)

Comb.

0.008 (1%) 1.25D+1.5L L

0.011 (1%) 1.25D+1.5L L

1.25D+1.5L L

Case

Uniform

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1198	516	0	0
2	Vertical	30	29	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.688"	Vert	84%	645 / 1797	2442	L	1.25D+1.5L
2 - SPF End Grain	1.625"	Vert	4%	36 / 45	81	L	1.25D+1.5L

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.



3'8 9/16" 0.237 (L/360) 0.005 (1%) D

3'8 5/8" 0.178 (L/480) 0.007 (1%) L

3'8 9/16" 0.355 (L/240) 0.007 (1%) D+L

Design Notes

LL Defl inch

Analysis Results

Perm Defl in. 0.001

TL Defl inch 0.002

Dead:

Analysis

Moment

Shear

Unbraced

- 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.

15 PSF

Actual

141 ft-lb

141 ft-lb

(L/70817)

(L/67516)

(L/34564)

62 lb

0.001

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.

4 Bottom mu	st be laterally braced at	bearings.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-0-5		Тор	21 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Tie-In	0-0-1 to 7-4-2	0-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	**
3	Point	0-0-1		Тор	472 lb	1167 lb	0 lb	0 lb	C1
	Bearing Length	0-3-8							
4	Part. Uniform	0-0-5 to 0-3-1		Тор	64 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
l	Self Weight				5 PLF				

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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product informatic regarding installation requirements, multi-p regarding installation requirements, multi-fastening details, beam strength values, and or approvals
- naged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rolation

6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontari 618-838-2775 D/\905-642-4400



Page 2 of 37



Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

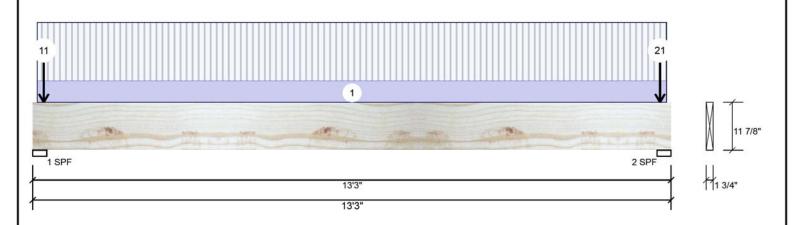
7/5/2021

WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

F13-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Info	rmation			Unfa	ctored Rea	actions UNI	PATTERNED I	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	140	165	69	0
Moisture Condition	on: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	149	115	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					3.7	115 20.000	13002		
Floor Live:	40 PSF			Bear	ings and F	actored Rea	ections		
Dead:	15 PSF			Bea	ring Length	Dir. Cap	. React D/L lb	Total Ld. Case	Ld. Comb.
				1-5	SPF 3.500"	Vert 13%	6 206 / 279	485 L	1.25D+1.5L +S
Analysis Resu	lts			2-5	SPF 3.500"	Vert 10%	6 144 / 223	367 L	1.25D+1.5L
	75	St. 1700 St. 100 St.	CO 2000 70 SA				<u> </u>	Me	

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	769 ft-lb	6'7 1/2"	17130 ft-lb	0.045 (4%)	1.25D+1.5L	L
Unbraced	769 ft-lb	6'7 1/2"	17130 ft-lb	0.045 (4%)	1.25D+1.5L	L
Shear	207 lb	1'3 3/8"	5798 lb	0.036 (4%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/10562)	6'7 9/16"	0.426 (L/360)	0.034 (3%)	D	Uniform
LL Defl inch	0.022 (L/7090)	6'7 9/16"	0.320 (L/480)	0.068 (7%)	L+0.5S	L
TL Defl inch	0.036 (L/4242)	6'7 9/16"	0.640 (L/240)	0.057 (6%)	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 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 Top must be continuously laterally braced.
- 6 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 15 PSF 0 PSF 40 PSF 0 PSF 1 Tie-In Top Point 0-2-12 21 lb 0 lb 2 Top 8 lb 0 lb Bearing Length 0-5-8 3 Point 0-2-12 Top 8 lb 0 lb 0 lb 0 lb Wall Self Weight Continued on page 2...

Notes

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation

6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

oshua.nabua

Page 3 of 37



Client: Project: Address:

GREENPARK

7/5/2021

Input by: WC

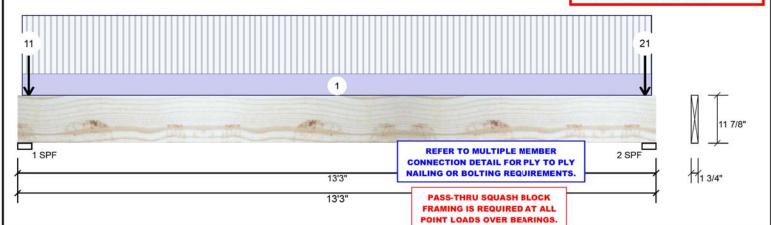
GLENROWAN 41-2-3 Job Name: GR41-2-3 STANDARD RICHMOND HILL,ON Project #: ROUNDEL HOMES INC

F13-A Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor

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ID	Load Type	Location Trib Wid	dth Side	Dead	Live	Snow	Wind	Comments	
	Bearing Length	0-5-8							
4	Point	0-2-12	Тор	8 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8							
5	Point	0-2-12	Тор	6 lb	0 lb	15 lb	0 lb		
	Bearing Length	0-5-8							
6	Point	0-2-12	Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8							
7	Point	0-2-12	Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8							
8	Point	0-2-12	Тор	13 lb	0 lb	33 lb	0 lb		
	Bearing Length	0-5-8							
9	Point	0-2-12	Тор	13 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8							
10	Point	0-2-12	Тор	13 lb	35 lb	0 lb	0 lb	J8	
	Bearing Length	0-5-8							
11	Point	0-2-12	Тор	13 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8							
12	Point	13-0-4	Тор	2 lb	4 lb	0 lb	0 lb		
	Bearing Length	0-5-8							
13	Point	13-0-4	Тор	13 lb	35 lb	0 lb	0 lb	J8	1
	Bearing Length	0-5-8							1
15	Point	13-0-4	Тор	13 lb	0 lb	0 lb	0 lb	Wall Self Weight	1
	Bearing Length	0-5-8							
16	Point	13-0-4	Тор	1 lb	2 lb	0 lb	0 lb		
	Bearing Length	0-5-8							
18	Point	13-0-4	Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8							
19	Point	13-0-4	Тор	1 lb	3 lb	0 lb	0 lb		



Notes

21

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.

Point

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

0-5-8

13-0-4

- I. UVL beams must not be cutor 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 rolation
- 6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

0 lb

8 lb

Top

Manufacturer Info Forex APA: PR-L318

0 lb

3228 Moodie Dr. Ottawa, Ontario 618-838-2775D/\905-642-4400

Wall Self Weight



joshua.nabua

0 lb

Bearing Length

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Client: Project: Address:

GREENPARK

7/5/2021

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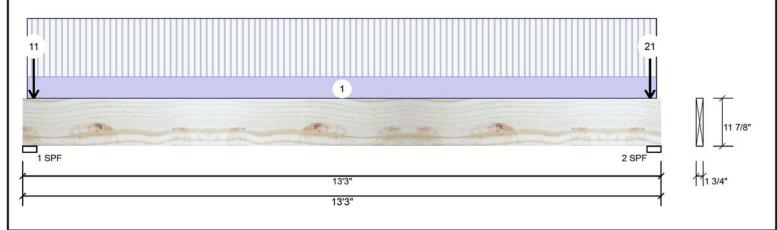
Job Name: GR41-2-3 STANDARD

GLENROWAN 41-2-3 RICHMOND HILL,ON Project #:

F13-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor

ROUNDEL HOMES INC



.Continued from page 2

ID Load Type

Bearing Length

Self Weight

Location Trib Width 0-5-8

Side

Dead

Live

Snow

Wind Comments

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.



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

- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

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Page 5 of 37



Client: Project: Address:

GREENPARK

7/5/2021

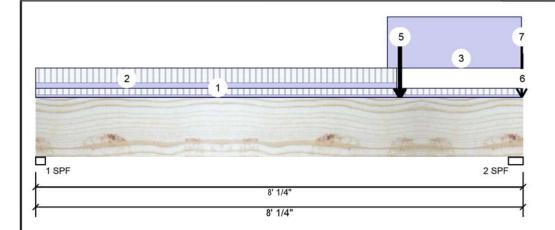
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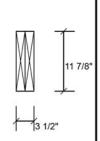
GLENROWAN 41-2-3 Job Name: GR41-2-3 STANDARD RICHMOND HILL, ON Project #: ROUNDEL HOMES INC

Forex 2.0E-3000Fb LVL F17-A

1.750" X 11.875"

2-Ply - PASSED Level: Ground Floor





Member Infor	mation			Unfa	actored Rea	actions UNP	ATTERNED I	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	Vertical	322	186	0	0
Moisture Condition	: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	1948	960	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					9 to 17	20 101025	5.55.0		
Floor Live:	40 PSF			Bear	rings and F	actored Rea	ctions		
Dead:	15 PSF			Bea	aring Length	Dir. Cap	. React D/L lb	Total Ld. Case	Ld. Comb.
				1 -	SPF 1.901"	Vert 17%	233 / 484	716 L	1.25D+1.5L
				1 2-	SPF 2.875"	Vert 67%	1199 / 2922	4122	1 25D+1 5I

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3062 ft-lb	5'11 3/4"	34261 ft-lb	0.089 (9%)	1.25D+1.5L	L
Unbraced	3062 ft-lb	5'11 3/4"	34261 ft-lb	0.089 (9%)	1.25D+1.5L	L
Shear	1661 lb	6'9 1/2"	11596 lb	0.143 (14%)	1.25D+1.5L	L
Perm Defl in.	0.009 (L/10831)	4'6 15/16"	0.258 (L/360)	0.033 (3%)	D	Uniform
LL Defl inch	0.016 (L/5871)	4'7 1/2"	0.194 (L/480)	0.082 (8%)	L	L
TI Defl inch	0.024 (L/3807)	4'7 5/16"	0.387 (L/240)	0.063 (6%)	D+L	L

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 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 6' 3/16' o.c.
- 7 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.

July 05 2021

ı	Lateral Sieriue	illess latio based oil	full Section width.								
ľ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
I	1	Tie-In	0-0-0 to 8-0-0	0-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
I	2	Tie-In	0-0-0 to 5-11-5	0-5-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
I	3	Part. Uniform	5-9-8 to 7-11-15		Тор	64 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
I	4	Point	5-11-12		Тор	184 lb	405 lb	0 lb	0 lb	F11 F11	
I		Bearing Length	0-3-8								

Continued on page 2...

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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation
- 6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

Manufacturer Info

APA: PR-L318



Version 21.40.338 Powered by iStruct™ Dataset: 21060301.1545

Page 6 of 37



Client: Project: Address:

GREENPARK

7/5/2021

Project #:

Input by:

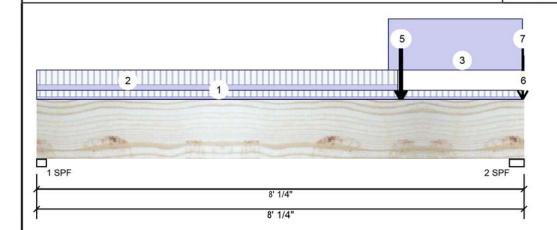
Job Name: GR41-2-3 STANDARD ROUNDEL HOMES INC

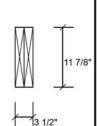
F17-A Forex 2.0E-3000Fb LVL

RICHMOND HILL, ON 1.750" X 11.875"

GLENROWAN 41-2-3

2-Ply - PASSED Level: Ground Floor





Continued	from	page '	1
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
5	Point	6-0-3		Near Face	205 lb	523 lb	0 lb	0 lb	F8	
6	Part. Uniform	7-11-15 to 8-0-4		Тор	43 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
7	Point	8-0-0		Тор	472 lb	1167 lb	0 lb	0 lb	C1	
	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.

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.



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.

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

 1. IVI, beams must not be cutor drilled

 2. Refer to manufacturer's product information regarding installation equirements, multi-ply fastering 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 rolation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Forex

APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

Page 15 of 37

Wind

Ld. Comb.

1.25D+1.5L

0

0

Snow

Total Ld. Case

339 L

40

0



Client: Project:

GREENPARK

GLENROWAN 41-2-3 Address:

RICHMOND HILL, ON

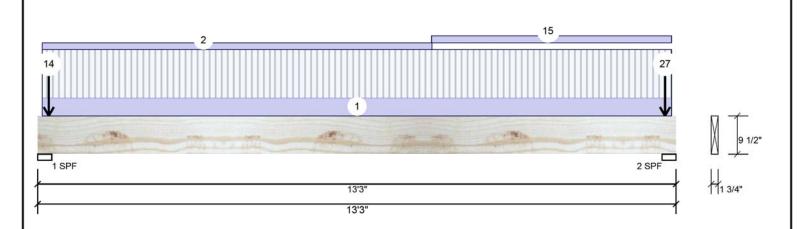
7/5/2021 Date

Input by: WC

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED F7-A

Level: Ground Floor



Member Inform	nation
Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	240
Importance:	Normal - II
General Load	
Floor Live	40 PSF

15 PSF

Application: Floor (Residential) Design Method: LSD Building Code: NBCC 2015 / OBC 2012 Load Sharing: No

Not Checked Vibration: Not Checked Unfactored Reactions UNPATTERNED Ib (Uplift) Brg Direction Live Dead 100 119 1 Vertical 2 Vertical 116 95

Bearings and Factored Reactions Bearing Length Dir. Cap. React D/L lb 1 - SPF 3.500" Vert 9%

149 / 190 +S 2 - SPF 3.500" Vert 8% 119 / 174 293 L 1.25D+1.5L

Analysis Results Analysis Location Allowed Case Actual Capacity Comb. 6'7 1/2" 11362 ft-lb Moment 407 ft-lb 0.036 (4%) 1.25D+1.5L L Unbraced 407 ft-lb 6'7 1/2" 11362 ft-lb 0.036 (4%) 1.25D+1.5L L 0.025 (2%) 1.25D+1.5L L 114 lb 12'2" 4638 lb Shear Perm Defl in. 0.019 (L/8075) 6'7 9/16" 0.426 (L/360) 0.045 (4%) D Uniform LL Defl inch 0.018 (L/8546) 6'7 9/16" 0.320 (L/480) 0.056 (6%) L+0.5S L

Deck:

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

TL Defl inch 0.037 (L/4152)

Dead:

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.5.

6'7 9/16" 0.640 (L/240) 0.058 (6%) D+L+0.5S

- 2 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam
- 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 Top must be continuously laterally braced.
- 6 Rottom 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.



o Bottom	must be laterally braced a	at bearings.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-1-2 to 13-1-14	0-2-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-1-2 to 8-2-1		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-2-12		Тор	4 lb	0 lb	10 lb	0 lb	
	Bearing Length	0-5-8							
4	Point	0-2-12		Тор	5 lb	14 lb	0 lb	0 lb	J8
Continued o	n page 2								

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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-plifastening details, beam strength values, and code approvals
- naged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rolation

6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318

3228 Moodie Dr. Ottawa, Ontari 618-838-2775 D/\905-642-4400



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isDesign

Client: Project: Address:

GREENPARK

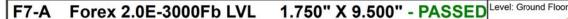
GLENROWAN 41-2-3

RICHMOND HILL, ON

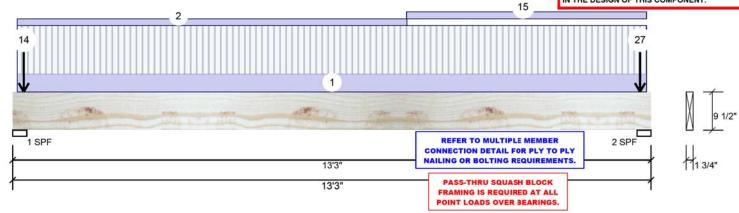
7/5/2021

WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC



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.



Continued	from page 1	200		Sec. 1999				400000		
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
	Bearing Length	0-5-8								
5	Point	0-2-12		Тор	4 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8								
6	Point	0-2-12		Тор	5 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8								
7	Point	0-2-12		Тор	6 lb	0 lb	15 lb	0 lb		
	Bearing Length	0-5-8								
8	Point	0-2-12		Тор	7 lb	20 lb	0 lb	0 lb	J8	
	Bearing Length	0-5-8								
9	Point	0-2-12		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8								
10	Point	0-2-12		Тор	7 lb	0 lb	0 lb	0 lb	Wall Self Weight	1
	Bearing Length	0-5-8								15
11	Point	0-2-12		Тор	6 lb	0 lb	15 lb	0 lb		1
	Bearing Length	0-5-8								1
12	Point	0-2-12		Тор	7 lb	20 lb	0 lb	0 lb	J8	
	Bearing Length	0-5-8								
13	Point	0-2-12		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Bearing Length	0-5-8								
14	Point	0-2-12		Тор	7 lb	0 lb	0 lb	0 lb	Wall Self Weight	
I										

Top

Top

Top

Top

Top



Notes

15

16

18

19

20

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.

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

0-5-8

13-0-4

0-5-8

13-0-4

0-5-8 13-0-4

0-5-8

13-0-4

0-5-8

8-2-0 to 13-1-14

- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

1 PLF

9 lb

1 lb

7 lb

9 lb

0 PLF

24 lb

2 lb

0 lb

24 lb

Manufacturer Info Forex APA: PR-L318

0 PLF

0 lb

0 lb

0 lb

0 lb

0 PLF

0 lb J8

0 lb

0 lb **J8**

Wall Self Weight

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

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Version 21.40.338 Powered by iStruct™ Dataset: 21060301.1545

Bearing Length

Bearing Length

Bearing Length

Bearing Length

Bearing Length

Part. Uniform

Point

Point

Point

Point

Page 17 of 37



Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

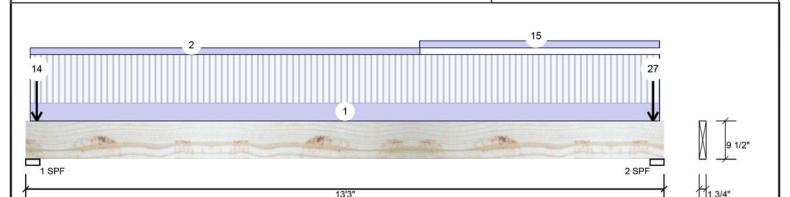
7/5/2021

WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

Level: Ground Floor

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED F7-A



Continued f	from page 2								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
22	Point	13-0-4		Тор	1 lb	2 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
23	Point	13-0-4		Тор	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
24	Point	13-0-4		Тор	6 lb	17 lb	0 lb	0 lb	J8
	Bearing Length	0-5-8							
26	Point	13-0-4		Тор	1 lb	1 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
27	Point	13-0-4		Тор	5 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				4 PLF				

13'3'

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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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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- 1. LVL beams must not be cutor 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 roiation

- For flat roofs provide proper drainage to prevent ponding

Forex APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400



This design is valid until 5/24/2024

Version 21.40.338 Powered by iStruct™ Dataset: 21060301.1545

CSD joshua.nabua

Page 18 of 37



Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

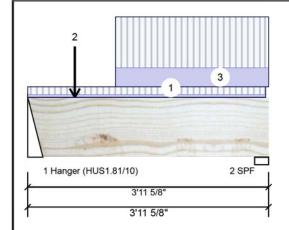
7/5/2021

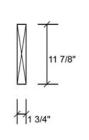
WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

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

Level: Ground Floor





Member Inform	nation				Unf	actored Rea	ctions UNI	PATTERNED I	b (Uplift)	
Type:	Girder		Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1		Design Method:	LSD	1	Vertical	523	205	0	0
Moisture Condition:	Dry		Building Code:	NBCC 2015 / OBC 2012	2	Vertical	595	232	0	0
Deflection LL:	480		Load Sharing:	No						
Deflection TL:	240		Deck:	Not Checked						
Importance:	Normal - II		Vibration:	Not Checked						
General Load										
Floor Live:	40 PSF				Bea	rings and F	actored Rea	ctions		
Dead:	15 PSF				Bea	aring Length	Dir. Cap	. React D/L lb	Total Ld. Case	Ld. Comb.
					1 - Ha	3.000" nger	Vert 279	6 257 / 785	1042 L	1.25D+1.5L
Analysis Results	s				2-	SPF 2.938"	Vert 379	6 290 / 893	1183 L	1.25D+1.5L
Analysis Act	ual	Location Al	lowed Capaci	ty Comb. Case		DEFED T	NAUL TIPLE			

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	948 ft-lb	2' 5/16"	17130 ft-lb	0.055 (6%)	1.25D+1.5L	L
Unbraced	948 ft-lb	2' 5/16"	17130 ft-lb	0.055 (6%)	1.25D+1.5L	L
Shear	1463 lb	1'2 7/8"	5798 lb	0.252 (25%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/22421)	2' 1/8"	0.120 (L/360)	0.016 (2%)	D	Uniform
LL Defl inch	0.005 (L/8759)	2' 1/8"	0.090 (L/480)	0.055 (5%)	L	L
TL Defl inch	0.007 (L/6299)	2' 1/8"	0.180 (L/240)	0.038 (4%)	D+L	L

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

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

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.

Self Weight

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.



5 Bottom r	nust have sheathing atta	iched of be continuou	siy braced.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Part. Uniform	0-0-0 to 3-11-1		Тор	15 PLF	40 PLF	0 PLF	0 PLF		
2	Point	0-9-5		Near Face	107 lb	286 lb	0 lb	0 lb	J8	
3	Part. Uniform	1-5-5 to 3-11-10		Near Face	100 PLF	267 PLF	0 PLF	0 PLF		

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

5 PLF

APA: PR-L318

Manufacturer Info



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Client: Project:

GREENPARK

7/5/2021

Project #:

WC Input by:

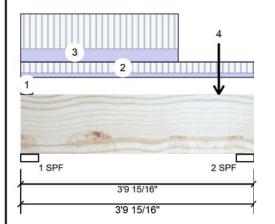
Job Name: GR41-2-3 STANDARD

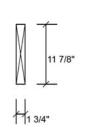
GLENROWAN 41-2-3 Address: RICHMOND HILL, ON

Level: Ground Floor

ROUNDEL HOMES INC

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





Member Inforn	nation			Unfa	ctored Rea	actions UNP	ATTERNED I	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	415	166	0	0
Moisture Condition:	: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	359	145	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					LS7 (2000)	115 S1.5649	THE STATE OF THE S		
Floor Live:	40 PSF			Bear	ings and F	actored Rea	ctions		
Dead:	15 PSF			Bea	ring Length	Dir. Cap.	React D/L lb	Total Ld. Case	Ld. Comb.
				1 - 8	SPF 3.500"	Vert 22%	208 / 622	830 L	1.25D+1.5L
		<u> </u>		2-8	SPF 3.500"	Vert 19%	181 / 539	720 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	580 ft-lb	1'10 3/8"	17130 ft-lb	0.034 (3%)	1.25D+1.5L	L
Unbraced	580 ft-lb	1'10 3/8"	17130 ft-lb	0.034 (3%)	1.25D+1.5L	L
Shear	895 lb	2'6 9/16"	5798 lb	0.154 (15%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/35748)	1'10 5/8"	0.112 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/14400)	1'10 5/8"	0.084 (L/480)	0.033 (3%)	L	L
TL Defl inch	0.004 (L/10265)	1'10 5/8"	0.169 (L/240)	0.023 (2%)	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.

100528832 VINCE OF ONTA

July 05 2021

PROFESSIONA

I.MATIJEVIC

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.

_	4 Dottom mast n	ave officulting attache	ed of be continuous	ory bruccu.						
Г	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
l	1	Tie-In	0-0-0 to 0-2-6	1-5-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	2	Part. Uniform	0-0-0 to 3-9-15		Тор	20 PLF	52 PLF	0 PLF	0 PLF	
l	3	Part. Uniform	0-0-0 to 2-7-0		Far Face	62 PLF	164 PLF	0 PLF	0 PLF	
l	4	Point	3-3-0		Far Face	52 lb	139 lb	0 lb	0 lb	J6
l		Self Weight				5 PLF				

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- Handling & Installation
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- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rolation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Forex APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

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Page 20 of 37

isDesign

Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

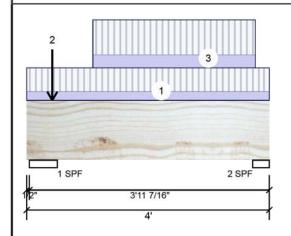
7/5/2021

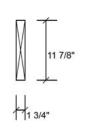
WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

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

Level: Ground Floor





Member Info	rmation			Unfa	actored Rea	actions UN	PATTERNED I	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	596	249	0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	374	150	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					Agrant Constraint	54 145(315	130.0		
Floor Live:	40 PSF			Bear	rings and Fa	actored Re	actions		
Dead:	15 PSF			Bea	aring Length	Dir. Ca	p. React D/L lb	Total Ld. Case	Ld. Comb.
				1 -	SPF 5.500"	Vert 20	% 311 / 893	1204 LL	1.25D+1.5L
				2 - 1	SPF 3.500"	Vert 20	% 187 / 562	749 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	604 ft-lb	2' 15/16"	17130 ft-lb	0.035 (4%)	1.25D+1.5L	_L
Unbraced	604 ft-lb	2' 15/16"	17130 ft-lb	0.035 (4%)	1.25D+1.5L	_L
Shear	494 lb	1'5 7/8"	5798 lb	0.085 (9%)	1.25D+1.5L	LL
Perm Defl in.	0.001 (L/34861)	2' 11/16"	0.117 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/13899)	2' 3/4"	0.087 (L/480)	0.035 (3%)	L	_L
TL Defl inch	0.004 (L/9937)	2' 3/4"	0.175 (L/240)	0.024 (2%)	D+L	_L
LL Cant	-0.000 (2L/20066)	Lt Cant	0.200 (2L/480)	0.000 (0%)	L	_L
TL Cant	-0.000 (2L/14376)	Lt Cant	0.300 (2L/240)	0.000 (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.



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.

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.

l	4 Bottom must	have sheathing attache	ed or be continuou	sly braced.							
I	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
I	1	Part. Uniform	0-0-0 to 4-0-0		Тор	32 PLF	85 PLF	0 PLF	0 PLF		
I	2	Point	0-5-1		Far Face	126 lb	294 lb	0 lb	0 lb	J5	
I	3	Part. Uniform	1-1-1 to 3-9-1		Far Face	47 PLF	126 PLF	0 PLF	0 PLF		
١		Self Weight				5 PLF					

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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400



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Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

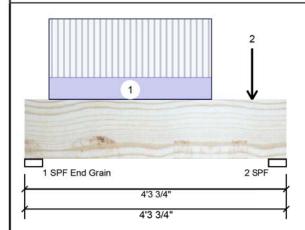
7/5/2021

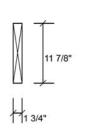
WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

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

Level: Ground Floor





Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: 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 UNP	ATTERNED Ib	(Uplift)
--------------------------	-------------	----------

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	330	133	0	0
2	Vertical	365	146	0	0
ı					

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	677 ft-lb	2'1 5/16"	17130 ft-lb	0.039 (4%)	1.25D+1.5L	L
Unbraced	677 ft-lb	2'1 5/16"	17130 ft-lb	0.039 (4%)	1.25D+1.5L	L
Shear	1025 lb	3' 3/8"	5798 lb	0.177 (18%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/31156)	2'1 9/16"	0.128 (L/360)	0.012 (1%)	D	Uniform
LL Defl inch	0.004 (L/12435)	2'1 9/16"	0.096 (L/480)	0.039 (4%)	L	L
TI Deflinch	0.005 (L/8888)	2'1 9/16"	0.193 (L/240)	0.027 (3%)	D+L	Ĺ

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.505"	Vert	15%	167 / 495	662	L	1.25D+1.5L
2-SPF	3.500"	Vert	19%	183 / 547	730	L	1.25D+1.5L

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.



July 05 2021

- 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

1 Dottoill II	naot nave eneatiming atte	ionica or be continued	ny bracca.						
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-4-13 to 3-0-13		Far Face	72 PLF	193 PLF	0 PLF	0 PLF	
2	Point	3-8-13		Far Face	67 lb	180 lb	0 lb	0 lb	J6
	Self Weight				5 PLF				

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 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

shua.nabua

2X8 FRAMING

-3 X J8-B-

1 3

18-D

F14-A - 2 ply

Second Floor LVL/LSL (Flush) Label Description F12 Forex 2.0E-3000Fb LVL F11 Forex 2.0E-3000Fb LVL F16 Forex 2.0E-3000Fb LVL F15 Forex 2.0E-3000Fb LVL Forex 2.0E-3000Fb LVL I Joist (Flush) Label Description J10 AJS 24 J9 AJS 24 J8 AJS 24 J7 AJS 24

> 3.5 11.875 J3 AJS 24 9 Rim Board Qty Plies Label Description Width Depth Norbord Rimboard R1 1.125 11.875 15 Plus 1.125 X

Member Label Pcs Description Skew Slope fasteners fasteners H1 24 LF3511 2 #8x1 1/4WS 12 10d 1 HUS1.81/10 30 10dx1 1/2 10 16d

Builder Width Depth Qty Plies Pcs Length GREENPARK 11.875 12-0-0 Project ROUNDEL HOMES INC 1.75 11.875 10-0-0 1.75 11.875 8-0-0 2 1.75 11.875 2 2 6-0-0 1.75 11.875 2 2-0-0 Width Depth Qty Plies Pcs Length 3.5 11.875 34 18-0-0 3.5 11.875 12 16-0-0 3.5 11.875 18 14-0-0 3.5 11.875 1 12-0-0 J5 AJS 24 3.5 11.875 8 8-0-0 2-0-0 Pcs Length 11.875 Blocking Label Description Width Depth Qty Plies Pcs Length 3.5 11.875 LinFt BLK1 AJS 24 Varies 50-0-0 Hanger Beam/Girder Supported

Shipping GLENROWAN 41-2-3 RICHMOND HILL,ON Sales Rep RALPH MIRIGELLO Designer WC **Plotted** May 16, 2022 Layout Name GR41-2-3 STANDARD & DECK CONDITION Job Path **DESIGN CRITERIA** Second Floor 12-0-0 Design Method **Building Code** Floor oads Dead **Deflection Joist** LL Span L/ TL Span L/ Deflection Flush Girder LL Span L/ TL Span L/

JOB INFORMATION

Decking **CCMC References**

Deflection Header LL Span L/

Deflection Dropped Girder

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

LL Span L/

TL Span L/

TL Span L/

Decking

Kott Inc.

3228 Moodie Dr, Ottawa

613-838-2775 / 905-642-4400

14 Anderson Blvd, Uxbridge Ontario

IM0721-008-R1 Page 28 of 35

LSD (Canada)

40

15

480

240

480

240

480

240

480

240

5/8" OSB

NBCC 2015 / OBC 2012

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

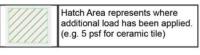
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls

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

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.



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

This placement plan is to be used as an installation guide only. It is meant to be used in conjunction with the manufacturers installation guide, the architectural and structural drawings, and not to replace them. 12. Multi ply beams with side loading to have all fasteners installed with the head

J10-C

J10-I

J10-G

J10-B

J10-A

J10-F

J10-E

J10-D

Legend CITY OF RICHMOND HILL In Hanger Laber Denotes Web Stiffene PS Point Load Support Coad from Above/ 2 0 Wall Opening Norbord Rimboard Plus 1,125 X 11.875 AJS 24 11.875 L V L L Forex 2:0E-3000Fb LVL 1.75 X 11.875

2 X J8-H

F16-A - 2 ply

-J5-B - @ 16"--

F12-A - 1 ply

2X8 FRAMING

2 X J5-D 15

F15-A - 2 ply

Second Floor

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Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

7/5/2021

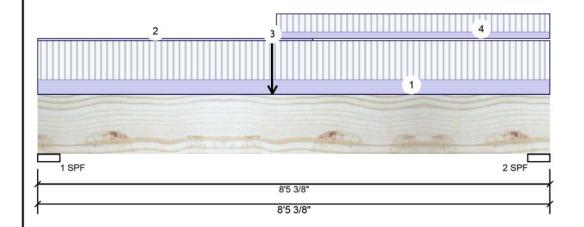
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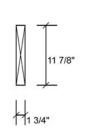
Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

Forex 2.0E-3000Fb LVL F11-A

1.750" X 11.875" - PASSED

Level: Second Floor





Member Information Type: Plies: 1

Moisture Condition: Dry Deflection LL: 480 Deflection TL: 240 Importance: Normal - II

General Load 40 PSF Floor Live: 15 PSF Dead:

Application: Floor (Residential)

Design Method: LSD Building Code: NBCC 2015 / OBC 2012

Deck:

Load Sharing: No Not Checked

Vibration: Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	445	204	0	0
2	Vertical	405	184	0	0

Rearings and Factored Reactions

Dearing.	Julia i c		u itcu	ctions			
Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.385"	Vert	20%	255 / 667	922	L	1.25D+1.5L
2-SPF	4.571"	Vert	17%	230 / 607	837	L	1.25D+1.5L

Analysis Results

Analysis Location Allowed Actual Capacity Comb. Case 0.173 (17%) 1.25D+1.5L L Moment 2960 ft-lb 3'10 5/16" 17130 ft-lb Unbraced 2960 ft-lb 3'10 5/16" 17130 ft-lb 0.173 (17%) 1.25D+1.5L L 0.150 (15%) 1.25D+1.5L L 869 lb 1'4 1/4" 5798 lb Shear Perm Defl in. 0.015 (L/6137) 3'10 3/8" 0.261 (L/360) 0.059 (6%) D Uniform LL Defl inch 0.035 (L/2700) 3'10 3/8" 0.196 (L/480) 0.178 (18%) L L TL Defl inch 0.050 (L/1875) 3'10 3/8" 0.391 (L/240) 0.128 (13%) D+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.



July 05 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 4'7 1/16" o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-5-6	0-5-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-6-6		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
3	Point	3-10-6		Far Face	271 lb	657 lb	0 lb	0 lb	F12
4	Tie-In	3-11-4 to 8-5-6	0-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product informatio regarding installation requirements, multi-pl details, beam strength values, and co
- naged Beams must not be used Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rolation
- 6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318

3228 Moodie Dr. Ottawa, Ontari 618-838-2775 D/\905-642-4400



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Client: Project: Address:

GREENPARK

GLENROWAN 41-2-3

RICHMOND HILL, ON

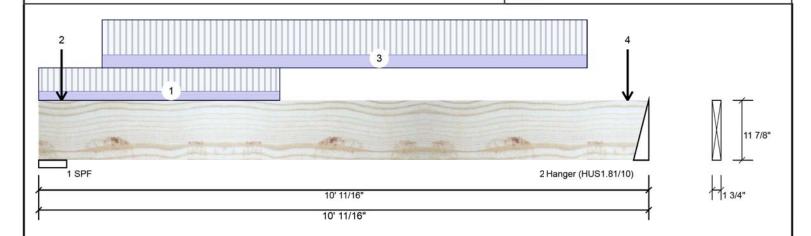
7/5/2021

WC Input by:

Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

F12-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



Member Inforn	nation			Unfa	actored Rea	actions UNP	ATTERNED II	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	Vertical	869	352	0	0
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	657	271	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked	1					
Importance:	Normal - II	Vibration:	Not Checked						
General Load					9 to 47 S S S S S S S S S S S S S S S S S S	200 1000205	500 H		
Floor Live:	40 PSF			Bear	rings and F	actored Rea	ctions		
Dead:	15 PSF			Bea	aring Length	Dir. Cap.	React D/L lb	Total Ld. Case	Ld. Comb.
				1 - 3	SPF 5.500"	Vert 29%	440 / 1304	1744 L	1.25D+1.5L
Analysis Result	s			2 - Har	3.000" nger	Vert 34%	339 / 986	1325 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3335 ft-lb	4'8 1/4"	17130 ft-lb	0.195 (19%)	1.25D+1.5L	L
Unbraced	3335 ft-lb	4'8 1/4"	17130 ft-lb	0.195 (19%)	1.25D+1.5L	L
Shear	1352 lb	8'9 13/16"	5798 lb	0.233 (23%)	1.25D+1.5L	L
Perm Defl in.	0.026 (L/4329)	5' 1/8"	0.316 (L/360)	0.083 (8%)	D	Uniform
LL Defl inch	0.064 (L/1770)	5' 1/16"	0.237 (L/480)	0.271 (27%)	L	L
TL Defl inch	0.090 (L/1257)	5' 1/16"	0.474 (L/240)	0.191 (19%)	D+L	L

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.

2 Rottom L	nust nave sneathing atta	icned or be continuous	siy braced.						
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-11-11		Тор	32 PLF	84 PLF	0 PLF	0 PLF	
2	Point	0-4-8		Far Face	30 lb	81 lb	0 lb	0 lb	J5
3	Part. Uniform	1-0-8 to 9-0-8		Far Face	47 PLF	125 PLF	0 PLF	0 PLF	
4	Point	9-8-8		Far Face	42 lb	112 lb	0 lb	0 lb	J5
	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.



July 05 2021

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 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- I. UVL beams must not be cutor drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam stength 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 rolation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Forex APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

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Client: Project: Address:

GREENPARK

7/5/2021

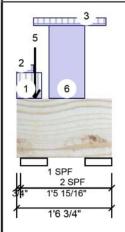
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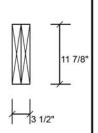
GLENROWAN 41-2-3 Job Name: GR41-2-3 STANDARD RICHMOND HILL, ON Project #: ROUNDEL HOMES INC

F14-A Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED Level: Second Floor





Member Infor	mation			Unfa	ctored Rea	actions UNF	ATTERNED I	b (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	Vertical	13	58	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	5	38	0	0
Deflection LL:	480	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal - II	Vibration:	Not Checked						
General Load					D17 (2004-0)	38- 30.0000	1 avigot 2		
Floor Live:	40 PSF			Bear	ings and Fa	actored Rea	ctions		
Dead:	15 PSF			Bea	ring Length	Dir. Cap	. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - 8	SPF 5.250"	Vert 1%	72 / 19	91 LL	1.25D+1.5L
	• Large			2 - 8	SPF 5.250"	Vert 1%	47/7	54 _L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11 ft-lb	9 1/8"	22269 ft-lb	0.001 (0%)	1.4D	Uniform
Unbraced	11 ft-lb	9 1/8"	22269 ft-lb	0.001 (0%)	1.4D	Uniform
Shear	38 lb	1'5 7/8"	7537 lb	0.005 (1%)	1.25D+1.5L	_L
Perm Defl in.	0.000 (L/458388)	9 1/8"	0.030 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/5246188)	8 1/2"	0.023 (L/480)	0.000 (0%)	L	_L
TL Defl inch	0.000 (L/421975)	9 1/8"	0.045 (L/240)	0.001 (0%)	D+L	_L
LL Cant	0.000 (2L/9208448)	Lt Cant	0.200 (2L/480)	0.000 (0%)	L	L_
TL Cant	-0.000 (21/9691500)	Lt Cant	0.300	0.000 (0%)	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

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July 05 2021

Notes

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- Handling & Installation
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 Damaged Beams must not be used

- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rolation

6. For flat roofs provide proper drainage to prevent

This design is valid until 5/24/2024

Manufacturer Info Forex

APA: PR-L318

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

oshua.nabua

Page 25 of 37



Client: Project: Address:

GREENPARK

7/5/2021

Project #:

Job Name: GR41-2-3 STANDARD

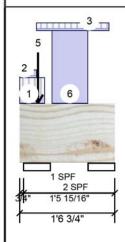
ROUNDEL HOMES INC

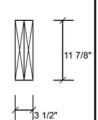
Input by: GLENROWAN 41-2-3

F14-A Forex 2.0E-3000Fb LVL

RICHMOND HILL, ON 1.750" X 11.875"

2-Ply - PASSED Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-14	0-6-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-3-5	0-1-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-3-5 to 1-5-10	0-1-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	0-3-10		Тор	15 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
5	Point	0-3-10		Тор	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Part. Uniform	0-6-6 to 1-1-6		Тор	80 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.

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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

APA: PR-L318

Manufacturer Info

3228 Moodie Dr. Ottawa, Ontario 618-838-2775D/\905-642-4400



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isDesign

Client: Project: Address:

GREENPARK

7/5/2021

WC Input by:

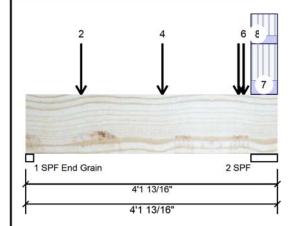
Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

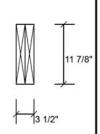
Forex 2.0E-3000Fb LVL F15-A

RICHMOND HILL, ON 1.750" X 11.875"

GLENROWAN 41-2-3

2-Ply - PASSED Level: Second Floor





Member Inforn	nation		
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		

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	vvina
1	Vertical	974	407	0	0
2	Vertical	1198	517	0	0
l					

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2170 ft-lb	2'2 15/16"	34261 ft-lb	0.063 (6%)	1.25D+1.5L	L
Unbraced	2170 ft-lb	2'2 15/16"	34261 ft-lb	0.063 (6%)	1.25D+1.5L	L
Shear	2413 lb	2'8 1/2"	11596 lb	0.208 (21%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/19407)	2'2 3/8"	0.123 (L/360)	0.019 (2%)	D	Uniform
LL Defl inch	0.005 (L/8168)	2'2 3/8"	0.092 (L/480)	0.059 (6%)	L	L
TL Defl inch	0.008 (L/5749)	2'2 3/8"	0.184 (L/240)	0.042 (4%)	D+L	L

Bearings and Factored Reactions

				MAN ALPHANISM			
Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	1.581"	Vert	48%	509 / 1461	1971	L	1.25D+1.5L
2 SDE	5 447"	Vert	21%	646 / 1797	2443	1	1 25D+1 5I

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 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 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.

15 PSF

- 5 Top must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.

7 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-10-15		Far Face	168 lb	448 lb	0 lb	0 lb	J10
2	Point	0-10-15		Near Face	140 lb	337 lb	0 lb	0 lb	J9
3	Point	2-2-15		Far Face	175 lb	434 lb	0 lb	0 lb	J10
4	Point	2-2-15		Near Face	160 lb	384 lb	0 lb	0 lb	J9
5	Point	3-5-15		Far Face	91 lb	210 lb	0 lb	0 lb	J10

Continued on page 2...

Notes

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 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-pl regarding installation requirements, multi-fastening details, beam strength values, and co 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 rolation
- 6. For flat roofs provide proper drainage to prevent

Manufacturer Info APA: PR-L318

3228 Moodie Dr. Ottawa, Ontario 613-838-2775 D/\905-642-4400



This design is valid until 5/24/2024 oshua.nabua

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Client: Project: Address:

GREENPARK

7/5/2021

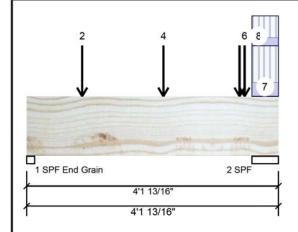
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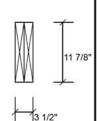
Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

Forex 2.0E-3000Fb LVL F15-A

GLENROWAN 41-2-3 RICHMOND HILL, ON 1.750" X 11.875"

2-Ply - PASSED Level: Second Floor





Continued	from	page	1
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-6-15		Near Face	146 lb	347 lb	0 lb	0 lb	J9
7	Tie-In	3-8-6 to 4-1-13	0-5-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
8	Tie-In	3-8-6 to 4-1-13	0-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

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

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This design is valid until 5/24/2024

Manufacturer Info Forex

APA: PR-L318

3228 Moodie Dr. Ottawa, Ontario 61B-838-2775 D/\905-642-4400

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Client: Project: Address:

GREENPARK

7/5/2021

Input by: WC

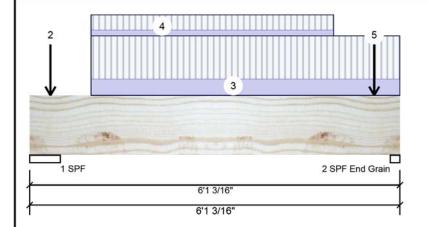
Job Name: GR41-2-3 STANDARD Project #: ROUNDEL HOMES INC

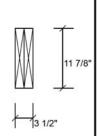
F16-A Forex 2.0E-3000Fb LVL

RICHMOND HILL, ON 1.750" X 11.875"

GLENROWAN 41-2-3

2-Ply - PASSED Level: Second Floor





Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	240
Importance:	Normal - II
General Load	

Floor Live: 40 PSF 15 PSF Dead:

Actual

3572 ft-lb

3572 ft-lb

(L/11178)

LL Defl inch 0.015 (L/4411)

TL Defl inch 0.021 (L/3163)

2357 lb

Analysis Results Analysis

Perm Defl in. 0.006

Moment

Shear

Unbraced

Floor (Residential)

Design Method: LSD Building Code:

NBCC 2015 / OBC 2012

Comb.

0.104 (10%) 1.25D+1.5L L

0.104 (10%) 1.25D+1.5L L

0.203 (20%) 1.25D+1.5L L

Case

Uniform

L

Load Sharing: No

Application:

Deck: Not Checked

Vibration: Not Checked

Capacity

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Direction Live		Snow	Wind	
1	Vertical	1459	576	0	0	
2	Vertical	1360	537	0	0	

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.026"	Vert	22%	721 / 2188	2908	L	1.25D+1.5L
2 - SPF End Grain	1.938"	Vert	54%	671 / 2040	2711	L	1.25D+1.5L

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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.

Location Allowed

3'2 7/8" 34261 ft-lb

3'2 7/8" 34261 ft-lb

3'2 3/4" 0.185 (L/360) 0.032 (3%) D

3'2 3/4" 0.278 (L/240) 0.076 (8%) D+L

3'2 13/16" 0.139 (L/480) 0.109 (11%) L

1'5 7/8" 11596 lb

- 2 Girders are designed to be supported on the bottom edge only.
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July 05 2021

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-4-1		Far Face	102 lb	273 lb	0 lb	0 lb	J10
2	Point	0-4-1		Near Face	46 lb	122 lb	0 lb	0 lb	J5
3	Part. Uniform	1-0-1 to 6-1-3		Far Face	132 PLF	352 PLF	0 PLF	0 PLF	
4	Part. Uniform	1-0-1 to 5-0-1		Near Face	46 PLF	124 PLF	0 PLF	0 PLF	
5	Point	5-8-1		Near Face	51 lb	136 lb	0 lb	0 lb	J5
	Self Weight				10 PLF				

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