



Modulus Engineering Ltd.
Document: ME-TC02 V 03-2017



*Document Outlines the Objectives,
Restrictions and Limitations
of EWP Component Seals*

MHP 23019

Sealed Engineered Wood Product (EWP) Components:

(Includes, but not limited to: I-Joists, LVL, LSL, Dimensional Lumber)

Modulus Engineering Ltd. (MEL) provides EWP component review among a variety of other engineering services to our clients. The scope of the work provided by EWP component review is governed by the arrangement between MEL and our client and not intended to extend or imply to extend beyond this scope. If further review or other engineering work beyond this scope is required, MEL may be retained by the client at the discretion of MEL.

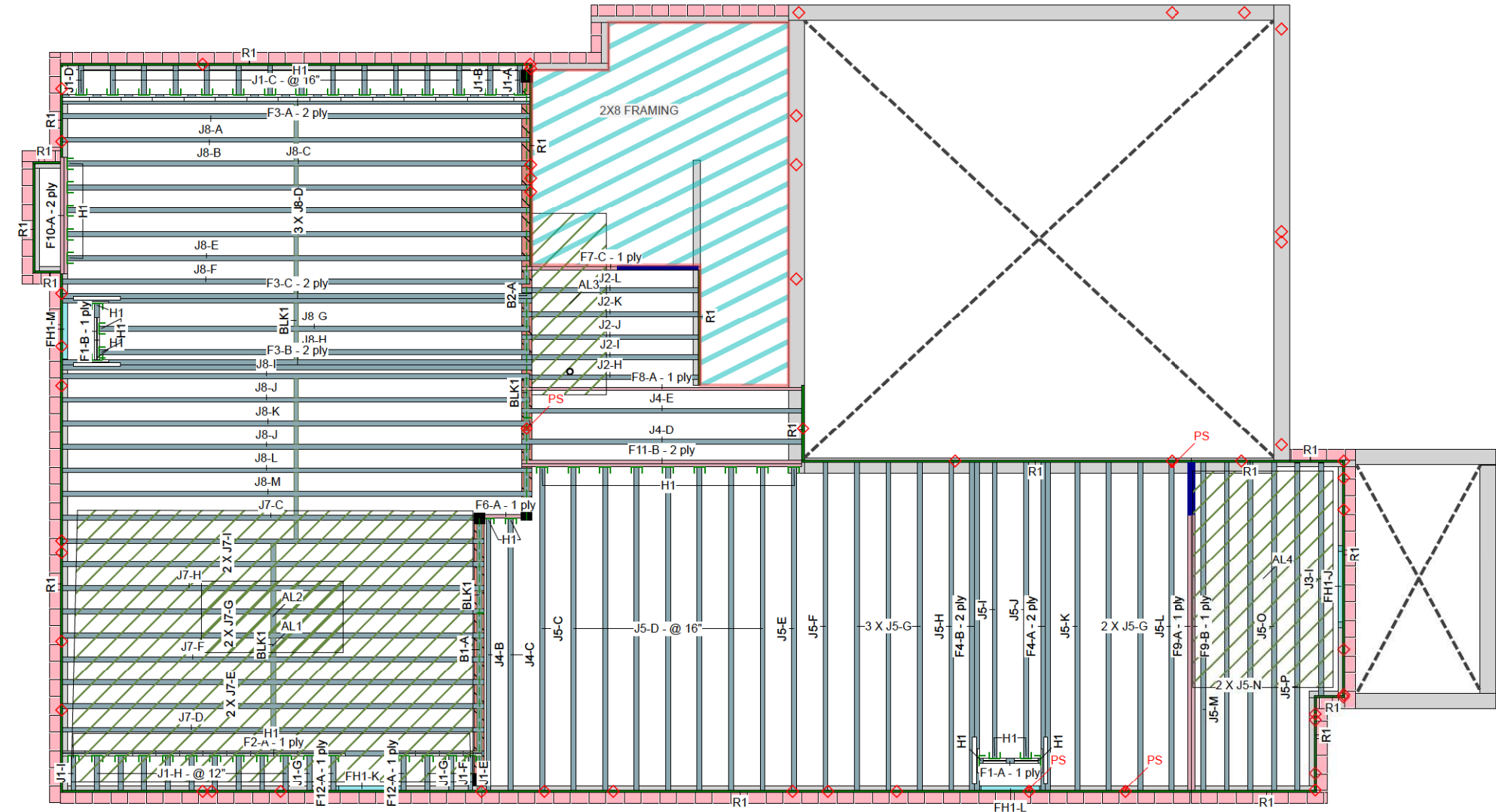
It is becoming more common that component review is requested by project engineers or building designers as a means of additional verification of proprietary EWP components they have specified on their drawings or by building departments for verification of components not covered explicitly in the building code. The intent of this document is to clarify the objectives of the review of the EWP components to ensure the project engineer or building designer and the building official understand the limitations of the component seals. Of particular importance, it should not be implied that the EWP component review and subsequent component seals provided are to be considered as review of the overall structure. This remains the responsibility of the project engineer of record (EOR) or building designer (Architect or other).


MEL reviews components produced by various proprietary design software programs, including: Mitek Sapphire (or Sapphire Supply), CSD iStruct, Simpson Strong-Tie Component Solutions, EZCad Wood-I and WoodWorks Sizer. Each program produces design notes that similarly attempt to clarify the limitations of the individual component design, with slight differences in language. The General Notes provided here are intended to supplement the notes on the sealed components and replace them where contradictions exist. If the intent is unclear, please contact MEL directly to ensure there are no unanswered questions.

General Notes:

- Although MEL reviews components submitted together with layouts provided by our clients (in order to review how the components frame to one another to check member to member loading in the structural model and to review the suitability of hangers noted as well as to determine lamination details provided on the component drawing), the individual component seal stands alone as a unique individual member design/review and the loading noted should also be verified by the building designer or EOR.
- Reactions shown are for gravity loads (vertical) or out of plane wind loads (horizontal, when reviewing wall components) on the member as noted only and does not include any additional loads that may be imposed by other factors such as overturning of shearwalls due to wind or seismic loads.
- Minimum bearing length noted is based on the EWP material itself unless the bearing capacity for the support is specifically noted (most often the case), for the full width of the member supported. If the capacity of the bearing material is less than the capacity of the member itself, a larger bearing length may be required, to be determined by building designer or EOR.
- Adequate bearing surface for large point loads from above must be provided, to be determined by building designer or EOR unless noted on the component design.
- Where bracing or lateral support assumptions are not noted on the component design, continuous bracing for any compression edge, point load location and bearing or support location is assumed.
- Design is based on Dry service condition, defined as an EMC average over the year of 15% or less and never over 19%.
- Dimensions and location of supports as provided and as noted on component design, to be verified by others.
- Lamination details provided on the component drawing have been designed as per CSA-086.
- Any hangers specified have been reviewed in accordance with manufacturers published capacity for gravity and uplift loads only.
- Any flat roof applications must have adequate drainage to avoid ponding and potential overloading of the structure as designed
- Building designer or EOR must ensure the structure is adequate to support the reactions shown (may include uplift at a bearing)
- Building designer or EOR is responsible for the overall structural design including the lateral stability of the structure.
- Products to be installed as per manufacturers instructions and/or as per details provided by the building designer or EOR
- Products should be stored on site and handled as per manufacturers recommendations.
- Damaged products or those modified outside the scope of the manufacturers recommendations should not be installed unless approved by an engineer or building official


MHP 23019












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

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

Ground Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	Forex 2.0E-3000Fb LVL	1.75	11.875			2	14-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875			1	12-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			1	8-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	6-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			1	4-0-0
I Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J8	AJS 140	2.5	11.875			16	20-0-0
J7	AJS 140	2.5	11.875			10	18-0-0
J5	AJS 140	2.5	11.875			25	14-0-0
J4	AJS 140	2.5	11.875			4	12-0-0
J3	AJS 140	2.5	11.875			1	10-0-0
J2	AJS 140	2.5	11.875			5	8-0-0
J1	AJS 140	2.5	11.875			29	2-0-0
F3	AJS 140	2.5	11.875	3	2	6	20-0-0
F2	AJS 140	2.5	11.875			1	18-0-0
F4	AJS 140	2.5	11.875	2	2	4	14-0-0
F1	AJS 140	2.5	11.875			2	4-0-0
F12	AJS 140	2.5	11.875			2	2-0-0
Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			14	12-0-0
Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt		Varies	36-0-0
Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	55	LF2511			12 10d	1 #8x1 1/4WS	

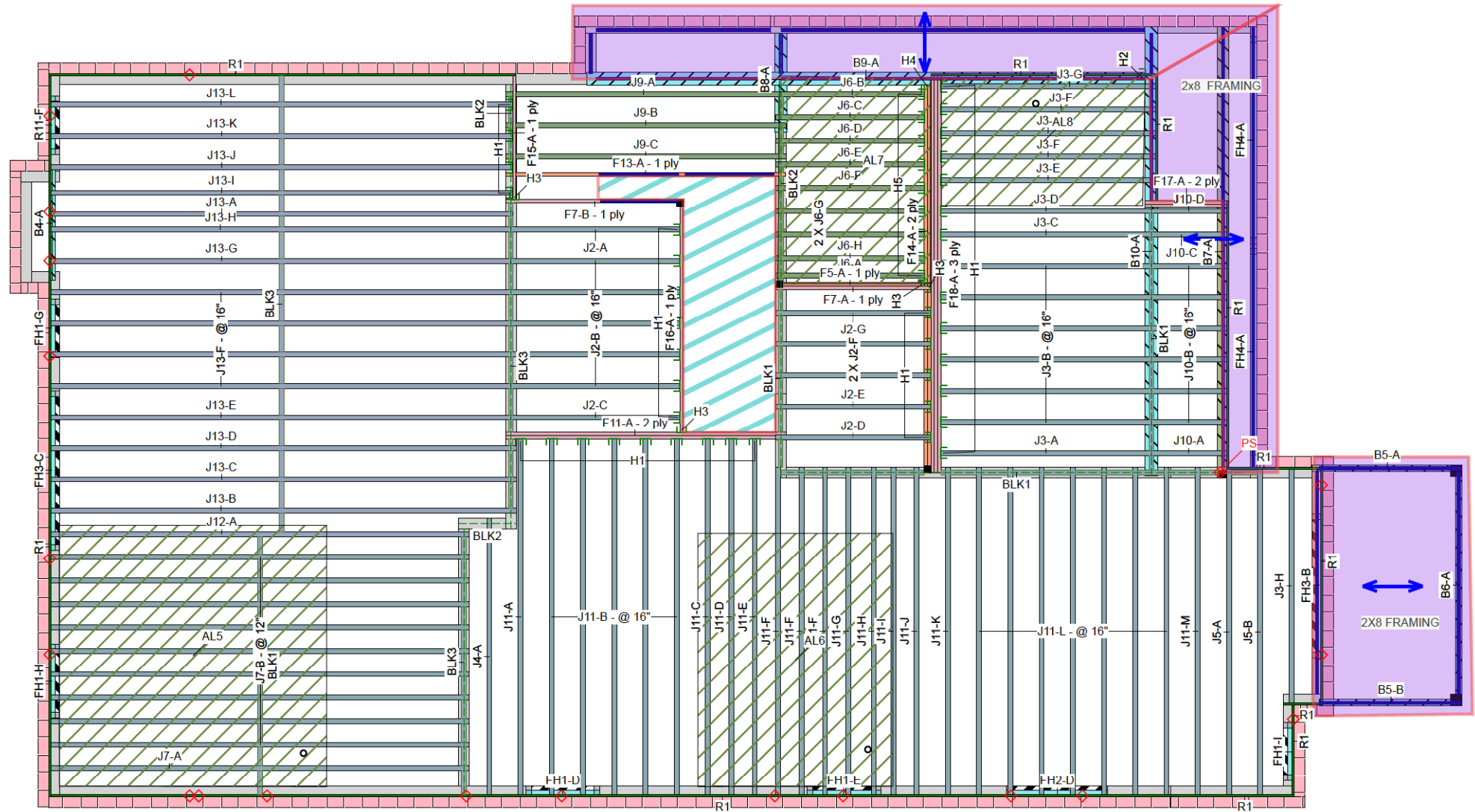
JOB INFORMATION	
Builder	GREENPARK
Project	ZADORRA ESTATES
Shipping	PENROSE 2 EL 3 OSHAWA, ON
Sales Rep	RALPH MIRIGELLO
Designer	W C
Plotted	June 07, 2022
Layout Name	PENROSE 2- EL 3
Job Path	
DESIGN CRITERIA	
Ground Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012
Floor Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	240
Deflection Flush Girder	
LL Span L/	480
TL Span L/	240
Deflection Dropped Girder	
LL Span L/	480
TL Span L/	240
Deflection Header	
LL Span L/	480
TL Span L/	240
Decking	
Decking	OSB
Thickness	3/4"
CCMC References	
Boise - 12472-R , 12787-R	
LP - 12412-R	
Forex - 14056-R	
Kott Inc.	
3228 Moodie Dr, Ottawa	
14 Anderson Blvd, Uxbridge	
Ontario	
613-838-2775 / 905-642-4400	
	

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

Legend	
	Point Load Support
	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 140 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	1.75 X 9.5 (Dropped)
	5.25 X 8 (Dropped)

CORPORATION OF THE CITY OF OSHAWA
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OF PERMIT PLANS
Nov 03 2023
PER: 
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MHP 23019



Second Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F14	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	18-0-0
F13	Forex 2.0E-3000Fb LVL	1.75	9.5			1	12-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			1	8-0-0
F18	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	18-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F16	Forex 2.0E-3000Fb LVL	1.75	11.875			1	10-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			2	8-0-0
F15	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F17	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

I Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J9	AJS 140	2.5	9.5			3	12-0-0
J6	AJS 140	2.5	9.5			9	8-0-0
J7	AJS 140	2.5	11.875			10	18-0-0
J11	AJS 140	2.5	11.875			25	16-0-0
J5	AJS 140	2.5	11.875			2	14-0-0
J4	AJS 140	2.5	11.875			1	12-0-0
J3	AJS 140	2.5	11.875			15	10-0-0
J2	AJS 140	2.5	11.875			12	8-0-0
J10	AJS 140	2.5	11.875			9	4-0-0
J13	AJS 20	2.5	11.875			15	20-0-0
J12	AJS 20	2.5	11.875			1	18-0-0

Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			13	12-0-0

Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK2	AJS 140	2.5	9.5	LinFt		Varies	7-0-0
BLK3	AJS 140	2.5	11.875	LinFt		Varies	9-0-0
BLK1	AJS 140	2.5	11.875	LinFt		Varies	42-0-0
BLK3	AJS 20	2.5	11.875	LinFt		Varies	28-0-0
BLK2	AJS 20	2.5	11.875	LinFt		Varies	2-0-0

Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	39	LF2511			12 10dx1 1/2	1 #8x1 1/4WS	
H2	1	Hanger by Others					
H3	4	HUS1.81/10			30 16d	10 16d	
H4	1	LF359			10 10d	2 #8x1 1/4WS	
H5	9	LF259			10 10d	1 #8x1 1/4WS	

JOB INFORMATION	
Builder	GREENPARK
Project	ZADORRA ESTATES
Shipping	PENROSE 2 EL 3 OSHAWA, ON
Sales Rep	RALPH MIRIGELLO
Designer	W C
Plotted	June 07, 2022
Layout Name	PENROSE 2- EL 3
Job Path	
DESIGN CRITERIA	
Second Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012
Floor	
Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	240
Deflection Flush Girder	
LL Span L/	480
TL Span L/	240
Deflection Dropped Girder	
LL Span L/	480
TL Span L/	240
Deflection Header	
LL Span L/	480
TL Span L/	240
Decking	
Decking	OSB
Thickness	5/8"
CCMC References	
Boise - 12472-R , 12787-R	
LP - 12412-R	
Forex - 14056-R	
Kott Inc.	
3228 Moodie Dr, Ottawa	
14 Anderson Blvd, Uxbridge	
Ontario	
613-838-2775 /	
905-642-4400	



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

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

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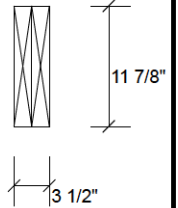
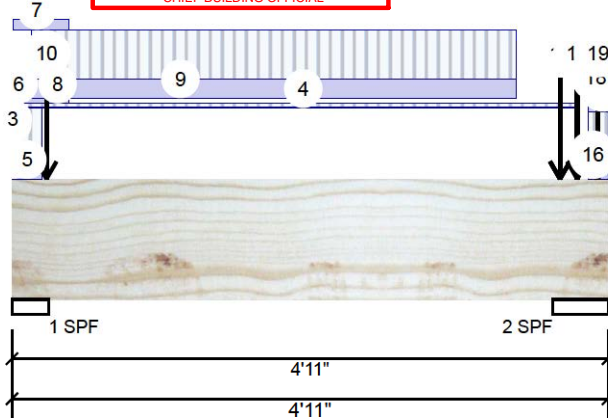
Legend

PS	Point Load Support
◇	Load from Above
▨	Wall
▩	Wall Opening
▨	Norbord Rimboard Plus 1.125 X 11.875
▨	AJS 140 9.5
▨	AJS 140 11.875
▨	AJS 20 11.875
▨	Forex 2.0E-3000Fb LVL 1.75 X 9.5

F10-A	Fo	NOV 03 - 2023	LVL	1.750" X 11.875"	2-Ply - PASSED	Level: Ground Floor
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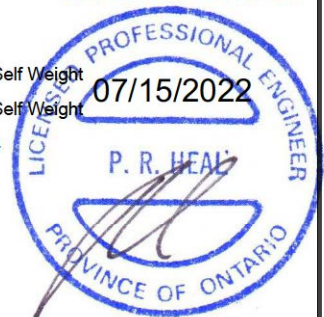
Level: Ground Floor

PER: _____
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-0-2		Top	74 PLF	198 PLF	0 PLF	0 PLF	J13
2	Part. Uniform	0-0-0 to 0-0-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 0-0-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tie-In	0-0-2 to 4-7-14	0-7-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	0-0-2 to 0-2-15		Top	148 PLF	396 PLF	0 PLF	0 PLF	J13
6	Part. Uniform	0-0-2 to 0-1-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	0-0-2 to 0-5-10		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	0-1-4 to 0-5-10		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Part. Uniform	0-1-15 to 4-1-15		Near Face	145 PLF	388 PLF	0 PLF	0 PLF	
10	Point	0-3-7		Top	748 lb	854 lb	597 lb	0 lb	B4 B4
	Bearing Length	0-5-8							
11	Point	4-6-4		Top	20 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
12	Point	4-6-4		Top	516 lb	687 lb	280 lb	0 lb	B4 B4
	Bearing Length	0-5-8							
13	Point	4-6-4		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
14	Point	4-6-4		Top	8 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
15	Point	4-7-15		Near Face	162 lb	388 lb	0 lb	0 lb	J8
16	Part. Uniform	4-9-0 to 4-11-0		Top	141 PLF	375 PLF	0 PLF	0 PLF	J13
17	Part. Uniform	4-9-0 to 4-11-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
18	Part. Uniform	4-9-0 to 4-11-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
19	Point	4-10-0		Top	188 lb	250 lb	102 lb	0 lb	B4 B4
	Bearing Length	0-5-8							
	Self Weight				10 PLF				

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SEE GENERAL NOTES
DOC: ME-TC02 V 03-2017
NOTE: ALTERING THIS DOCUMENT
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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.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 5/24/2024

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



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	11-8-15		Top	12 lb	28 lb	0 lb	0 lb	J11
	Bearing Length	0-5-8							
7	Point	11-8-15		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Point	11-8-15		Top	23 lb	51 lb	0 lb	0 lb	J11
	Bearing Length	0-5-8							
10	Point	11-8-15		Top	13 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
11	Point	11-8-15		Top	21 lb	48 lb	0 lb	0 lb	J11
	Bearing Length	0-5-8							
12	Point	11-8-15		Top	1 lb	3 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
13	Point	11-8-15		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				10 PLF				

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chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding


Manufacturer Info

Forex
APA: PR-L318

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



This design is valid until 5/24/2024



CORPORATION OF THE CITY OF OSHAWA
isDesign
PERMIT PLANS
NOV 03 2023

Client: GREENPARK
Project: PENROSE 2 EL 3
Address: OSHAWA, ON

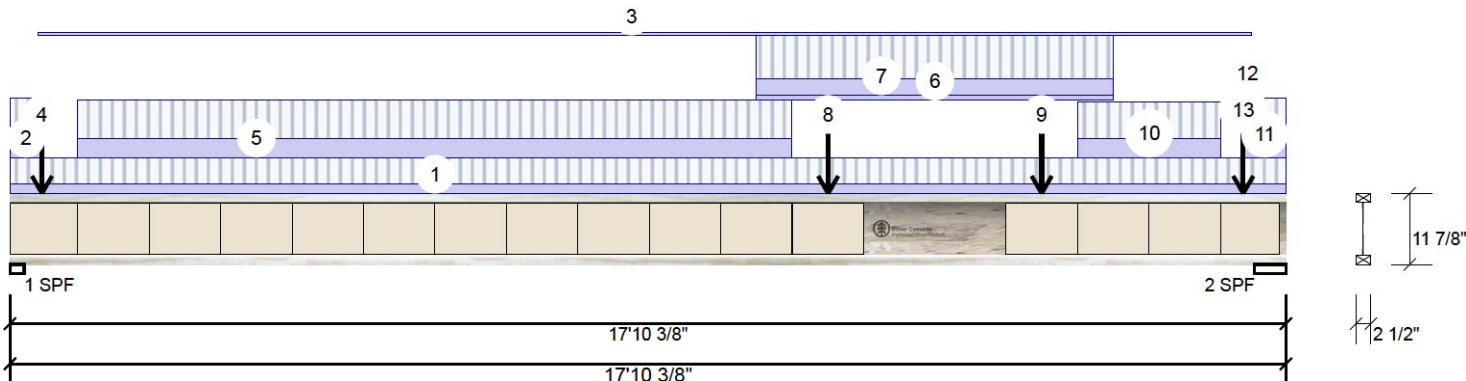
Date: 6/7/2022
Input by: W C
Job Name: PENROSE 2- EL 3
Project #: ZADORRA ESTATES

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ME22-0646-9

F2-A
A. *C. Morris*
PER: CHIEF BUILDING OFFICIAL

875" - **PASSED**
MHP 23019

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	11-5-7		Near Face	29 lb	58 lb	0 lb	0 lb	F12
9	Point	14-5-5		Near Face	29 lb	58 lb	0 lb	0 lb	F12
10	Part. Uniform	14-11-6 to 16-11-6		Near Face	14 PLF	28 PLF	0 PLF	0 PLF	
11	Tie-In	17-3-3 to 17-10-6	0-9-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
12	Part. Uniform	17-3-3 to 17-4-9		Top	4 PLF	0 PLF	0 PLF	0 PLF	
13	Point	17-3-3		Near Face	11 lb	23 lb	0 lb	0 lb	J1

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Notes

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Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

This design is valid until 5/24/2024

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



F6-A

Foi

NOV 03 2023

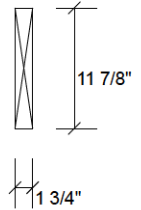
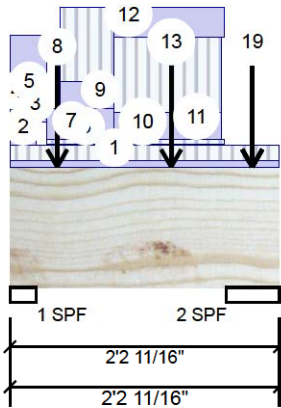
Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor

PER: _____
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MHP 23019



Member Information

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

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	352	219	0	0
2	Vertical	376	232	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	28%	273 / 528	801	L	1.25D+1.5L
2 - SPF	5.250"	Vert	15%	290 / 564	853	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	382 ft-lb	1'3 15/16"	17130 ft-lb	0.022 (2%)	1.25D+1.5L	L
Unbraced	382 ft-lb	1'3 15/16"	17130 ft-lb	0.022 (2%)	1.25D+1.5L	L
Shear	521 lb	9 9/16"	5798 lb	0.090 (9%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/33602)	1'3 5/8"	0.056 (L/360)	0.011 (1%)	D	Uniform
LL Defl inch	0.001 (L/18108)	1'3 15/16"	0.042 (L/480)	0.027 (3%)	L	L
TL Defl inch	0.002 (L/11769)	1'3 15/16"	0.085 (L/240)	0.020 (2%)	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 Top must be continuously laterally braced.
- 5 Bottom must have sheathing attached or be continuously braced.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-2-11	0-5-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-6-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tapered Start	0-0-0		Top	4 PLF	11 PLF	0 PLF	0 PLF	
	End	0-3-10			4 PLF	11 PLF	0 PLF	0 PLF	

Continued on page 2...

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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.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 5/24/2024

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



F7-C

Fo

NOV 03 2023

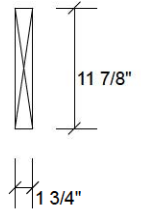
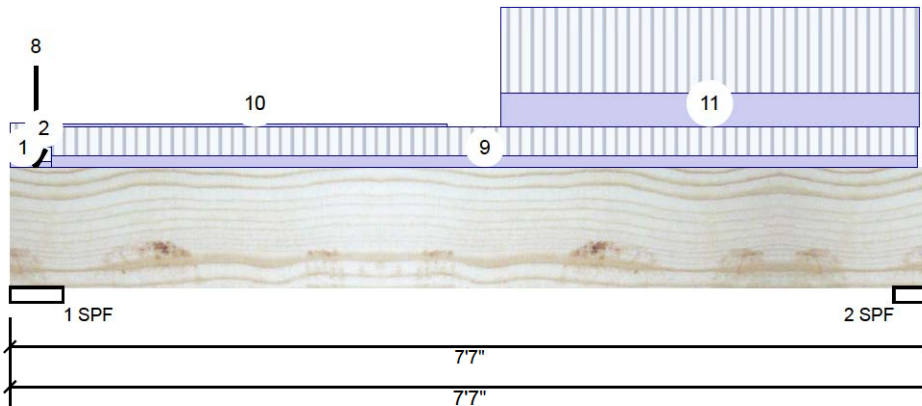
Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor

PER: _____
CHIEF BUILDING OFFICIAL

MHP 23019



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	0-2-9		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Point	0-2-9		Top	11 lb	29 lb	0 lb	0 lb	J13
	Bearing Length	0-5-8							
7	Point	0-2-9		Top	4 lb	11 lb	0 lb	0 lb	J2
	Bearing Length	0-5-8							
8	Point	0-2-9		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
9	Tie-In	0-4-2 to 7-5-14	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
10	Part. Uniform	0-5-3 to 3-7-4		Top	2 PLF	0 PLF	0 PLF	0 PLF	
11	Part. Uniform	4-0-9 to 7-5-15		Top	21 PLF	55 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

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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.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding


Manufacturer Info

Forex
APA: PR-L318

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



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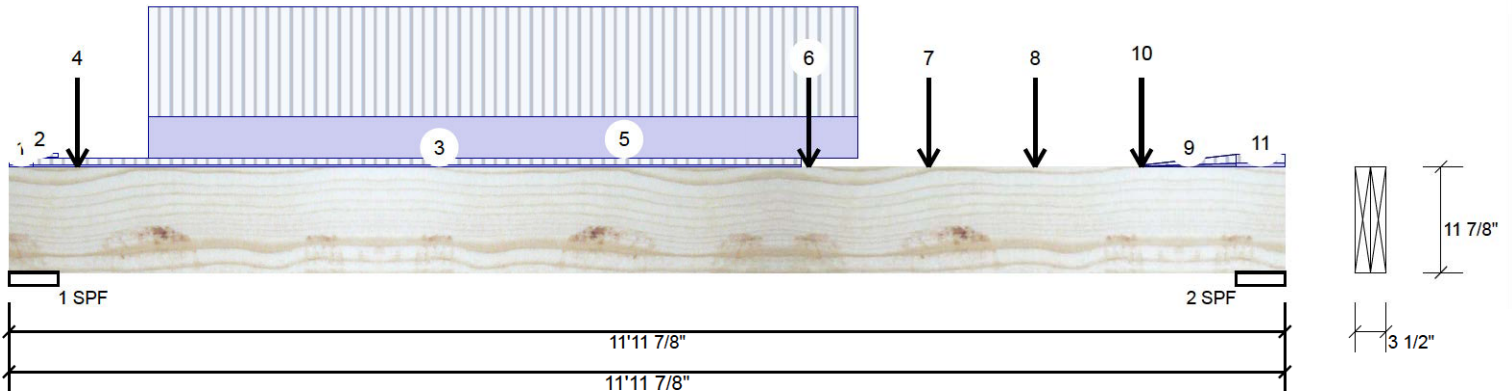
Client: GREENPARK
Project: PENROSE 2 EL 3
Address: OSHAWA, ON

Date: 6/7/2022
Input by: W C
Job Name: PENROSE 2- EL 3
Project #: ZADORRA ESTATES

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ME22-0646-23

F11-A
PER: 
CHIEF BUILDING OFFICIAL

Level: Second Floor
2-Ply - PASSED
MHP 23019



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	7-6-3		Far Face	277 lb	673 lb	0 lb	0 lb	F16
7	Point	8-7-12		Near Face	147 lb	350 lb	0 lb	0 lb	J11
8	Point	9-7-12		Near Face	129 lb	300 lb	0 lb	0 lb	J11
9	Tie-In	10-7-12 to 11-6-6	0-0-14 to 0-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
10	Point	10-7-12		Near Face	120 lb	277 lb	0 lb	0 lb	J11
11	Tie-In	11-6-6 to 11-11-14	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
Self Weight					10 PLF				

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Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 5/24/2024

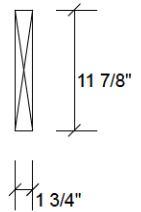
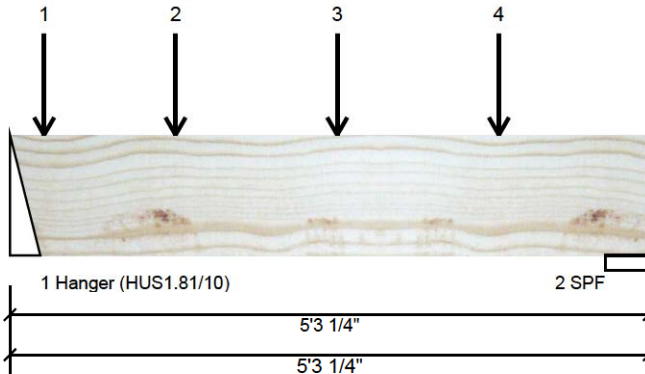
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3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



F15-A	F15-A	NOV 03 - 2023	OFF LVL	1.750" X 11.875" - PASSED	Level: Second Floor
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Level: Second Floor

MHP 23019



Member Information

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

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	838	326	0	0
2	Vertical	803	314	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	43%	407 / 1257	1664	L	1.25D+1.5L
2 - SPF	4.375"	Vert	34%	393 / 1205	1598	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2266 ft-lb	2'8 3/8"	17130 ft-lb	0.132 (13%)	1.25D+1.5L	L
Unbraced	2266 ft-lb	2'8 3/8"	17130 ft-lb	0.132 (13%)	1.25D+1.5L	L
Shear	1662 lb	1'2 7/8"	5798 lb	0.287 (29%)	1.25D+1.5L	L
Perm Defl in.	0.006 (L/9600)	2'8 3/8"	0.159 (L/360)	0.037 (4%)	D	Uniform
LL Defl inch	0.015 (L/3716)	2'8 3/8"	0.120 (L/480)	0.129 (13%)	L	L
TL Defl inch	0.021 (L/2679)	2'8 3/8"	0.239 (L/240)	0.090 (9%)	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.
- 5 Bottom must have sheathing attached or be continuously braced.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-6		Far Face	51 lb	137 lb	0 lb	0 lb	J13
2	Point	1-4-6		Far Face	177 lb	472 lb	0 lb	0 lb	J13
3	Point	2-8-6		Far Face	195 lb	521 lb	0 lb	0 lb	J13
4	Point	4-0-6		Far Face	192 lb	511 lb	0 lb	0 lb	J13
	Self Weight				5 PLF				

Self Weight

5 PLF

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

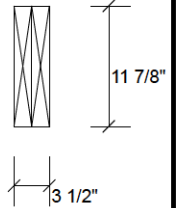
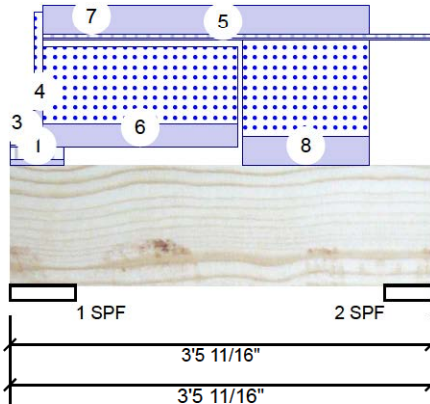


This design is valid until 5/24/2024

F17-A	Fo	NOV 03 - 2023	LVL	1.750" X 11.875"	2-Ply - PASSED	Level: Second Floor
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Level: Second Floor

PER: _____
CHIEF BUILDING OFFICIAL



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-6	0-6-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-3-4	0-1-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-3-4		Top	47 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-2-7 to 0-3-4		Top	35 PLF	0 PLF	119 PLF	0 PLF	
5	Tie-In	0-3-4 to 3-5-11	0-1-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	0-3-4 to 1-10-8		Top	35 PLF	0 PLF	119 PLF	0 PLF	
7	Part. Uniform	0-3-4 to 2-11-9		Top	47 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	1-11-0 to 2-11-9		Top	44 PLF	0 PLF	149 PLF	0 PLF	
	Self Weight				10 PLF				

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Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding


Manufacturer Info

Forex
APA: PR-L318

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613-838-2775 / 905-642-4400



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Nov 03-2023

Client: GREENPARK
Project: PENROSE 2 EL 3
Address: OSHAWA, ON

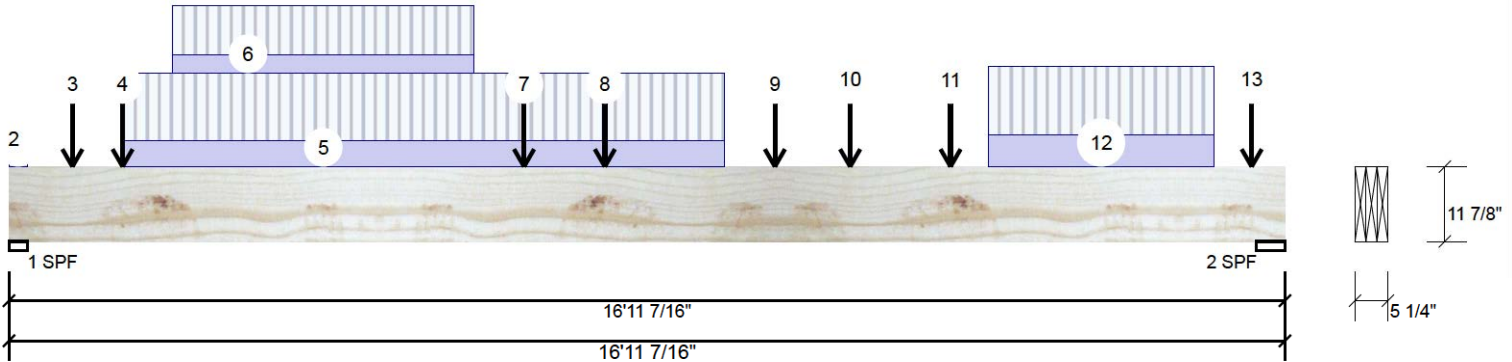
Date: 6/7/2022
Input by: W C
Job Name: PENROSE 2- EL 3
Project #: ZADORRA ESTATES

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ME22-0646-31

F18-A
Fol
PER: 
CHIEF BUILDING OFFICIAL

LVL 1.750" X 11.875" 3-Ply - PASSED
MHP 23019

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Part. Uniform	2-2-2 to 6-2-2		Far Face	48 PLF	127 PLF	0 PLF	0 PLF	
7	Point	6-10-2		Far Face	57 lb	153 lb	0 lb	0 lb	J2
8	Point	7-11-0		Far Face	41 lb	69 lb	0 lb	0 lb	F7
9	Point	10-2-2		Near Face	78 lb	207 lb	0 lb	0 lb	J3
10	Point	11-2-2		Near Face	87 lb	207 lb	0 lb	0 lb	J3
11	Point	12-6-2		Near Face	100 lb	207 lb	0 lb	0 lb	J3
12	Part. Uniform	13-0-2 to 16-0-2		Near Face	84 PLF	177 PLF	0 PLF	0 PLF	
13	Point	16-6-2		Near Face	57 lb	116 lb	0 lb	0 lb	J3
	Self Weight				14 PLF				

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Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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Kott Inc.

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



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