

CORPORATION OF THE CITY OF OSHAWA



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

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).

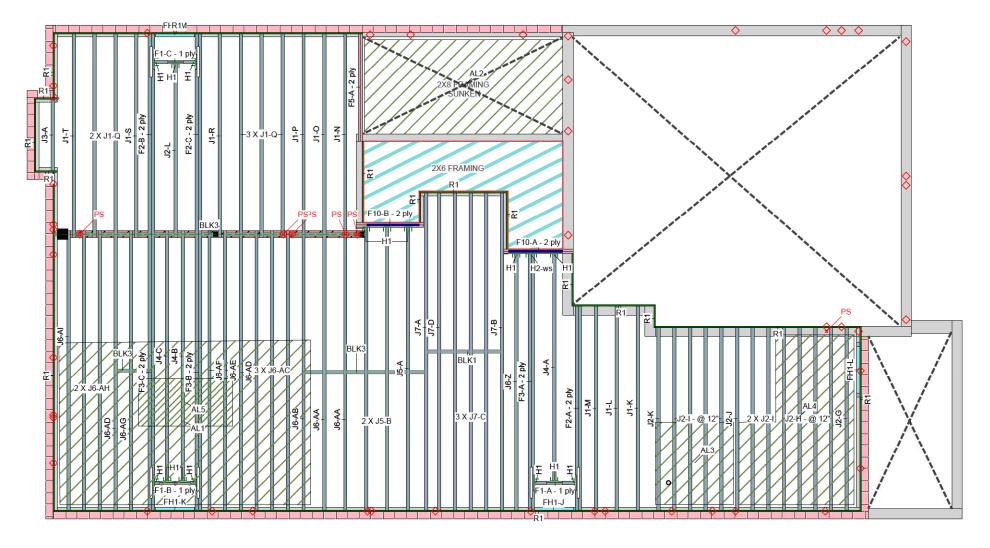
MEL reviews components produced by various proprietary design software programs, including: Mitek Sapphire (or Sapphire Supply), CSD iStruct, Simpson Strong-Tie Component Solutions, EZCad Wood-I and WoodWorks Sizer. Each program produces design notes that similarly attempt to clarify the limitations of the individual component design, with slight differences in language. The <u>General Notes</u> 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 23018



Ground												JO
LVL/LS									_			В
Label		ption	Width		pth	(Qty	Plies		Pcs	Length	17
F5	Forex 2.0E-3	000Fb LVL	1.7	5 11.	875		1	2		2	8-0-0	P
F10	Forex 2.0E-3	000Fb LVL	1.7	5 11.	875		2	2		4	6-0-0	١
Joist (s
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F3	AJS 14	•	2.		875		3	2		6	18-0-0	Ь—
F2	AJS 14	_	2.		875		3	2		6	14-0-0	۱s
F1	AJS 14	ŀO	2.	5 11.	875					3	4-0-0	
J5	AJS 14	10	2.	5 11.	875					3	20-0-0	D
J6	AJS 14	ł0	2.	5 11.	875					15	18-0-0	۱ ۱
J4	AJS 14	ŀO	2.	5 11.	875					3	16-0-0	P
J1	AJS 14	ŀO	2.	5 11.	875					14	14-0-0	Ι'.
J2	AJS 14	10	2.	5 11.	875					14	12-0-0	⊢
J3	AJS 14	ŀO	2.	5 11.	875					1	6-0-0	ᄔ
J7	AJS 20)	2.	5 11.	875					6	22-0-0	Ľ
Rim Bo	ard											J.
Label	Descri	ption	Width	n De	pth	(Qty	Plies		Pcs	Length	D
R1	Norbor Plus 1. 11.875		1.12		875		•			13	12-0-0	G
Blockin	g											В
Label	Descri	ption	Width	n De	pth	(Qty	Plies		Pcs	Length	FI
BLK3	AJS 14	10	2.	5 11.	875	Li	inFt		V	/aries	22-0-0	Lo
BLK1	AJS 20)	2.	5 11.	875	Li	inFt		V	/aries	4-0-0	Li
Hanger				·	•		Bea	am/Gird	er		ported ember	D D Li
Label	Pcs	Descriptio	n	Skew	Slop	pe	fa	steners		fas	teners	1ті
H1	15	LF2511				\neg		12 10d	\top	1 #8x	1 1/4WS	Ь
H2	1	HU310-2						14 16d		6	10d	ال
												17

OB INFORMATION uilder GREENPARK roject ZADORRA ESTATES hipping PENROSE 1- EL 3 OSHAWA,ON ales Rep RALPH MIRIGELLO esigner W C lotted June 02, 2022 ayout Name PENROSE 1-EL 3 ob Path ESIGN CRITERIA round Floor

LSD (Canada) esign Method NBCC 2015 / OBC 2012 uilding Code loor oads 40 15 ead eflection Joist 480 Span L/ Span L/ 240 eflection Flush Girder 480 Span L/ TL Span L/ 240 Deflection Dropped Girder 480 LL Span L/ TL Span L/ 240 **Deflection Header**

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

Forex - 14056-R

LL Span L/

TL Span L/ Decking

Decking Thickness

Kott Inc. 3228 Moodie Dr, Ottawa

613-838-2775 / 905-642-4400



480 240

OSB

3/4"

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

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

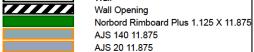
AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

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

Web Stiffener

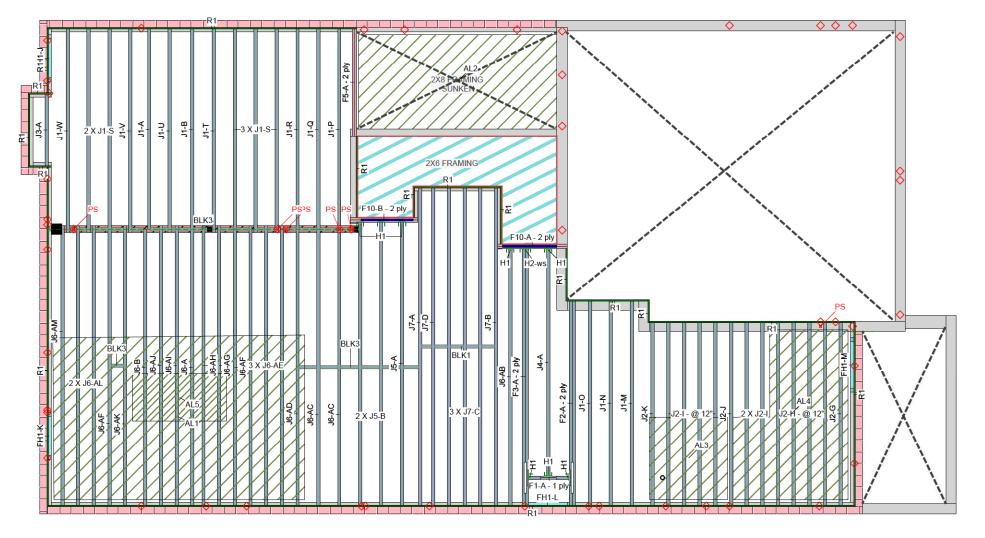
-WS PS ٥

In Hanger Label Denotes Web Stiffene Point Load Support Load from Above





MHP 23018



	L (Flus									* 1.000000
	Descr	iption	Widt		pth	(Qty	Plies	Pcs	Length
F5	Forex	000Fb LVL	1.7	5 11.	875		1	2	2	8-0-0
F10	Forex	000Fb LVL	1.7	5 11.	875		2	2	4	6-0-0
I Joist (Flush)									
Label	Descr		Widt	h De	pth	(Qty	Plies	Pcs	Length
F3	AJS 14	10	2.	5 11.	875		1	2	2	18-0-0
F2	AJS 14	10	2.	5 11.	875		1	2	2	14-0-0
F1	AJS 14	10	2.	5 11.	875				1	4-0-0
J5	AJS 14	10	2.	5 11.	875				3	20-0-0
J6	AJS 14	10	2.	5 11.	875				19	18-0-0
J4	AJS 14	10	2.	5 11.	875				1	16-0-0
J1	AJS 14	10	2.	5 11.	875				17	14-0-0
J2	AJS 14	10	2.	5 11.	875				13	12-0-0
J3	AJS 14	10	2.	5 11.	875				1	6-0-0
J7	AJS 20)	2.	5 11.	875				6	22-0-0
Rim Bo	ard									
Label	Descr	iption	Widt	h De	pth	(Qty	Plies	Pcs	Length
R1	Norbor Plus 1. 11.875		1.12	5 11.	875				13	12-0-0
Blockin	g									
Label	Descr	iption	Widt	h De	pth	(Qty	Plies	Pcs	Length
BLK3	AJS 14	10	2.	5 11.	875	L	inFt		Varies	21-0-0
BLK1	AJS 20)	2.	5 11.	875	L	inFt		Varies	4-0-0
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							Беа	am/Girde		ported ember
Label	Pcs	Descriptio	n	Skew	Slo	ре	fa	steners	fas	teners
H1	8	LF2511						12 10d	1 #8x	1 1/4WS
H2	1	HU310-2						14 16d	6	10d

OB INFORMATION uilder GREENPARK roject ZADORRA ESTATES Shipping PENROSE 1- EL 3 OSHAWA,ON ales Rep RALPH MIRIGELLO esigner) W C Plotted June 02, 2022 ayout Name PENROSE 1-EL 3 DECK CONDITION ob Path

ESIGN CRITERIA round Floor LSD (Canada) esign Method NBCC 2015 / OBC 2012 uilding Code loor oads ive 40 15 ead eflection Joist 480 _Span L/ LSpan L/ 240 eflection Flush Girder 480 LSpan L/ TL Span L/ 240 Deflection Dropped Girder 480 LL Span L/ TL Span L/ 240 Deflection Header

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Web Stiffener

-WS PS ٥

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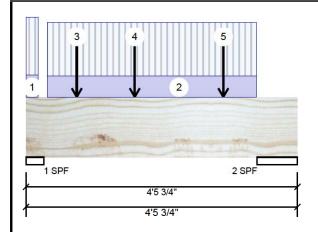
ClientOF PERRENBARKIS Project: Dec 06 2023

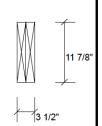
Date: 6/2/2022 ME0722-059 Input by: WC

Job Name: PENROSE 1-EL 3 Project #: ZADORRA ESTATES ME22-5724-1

Page 1 of 21







Member Information Type: Plies: Moisture Condition: Dry

Deflection LL: 480 Deflection TL: 240 Importance: Normal - II General Load

40 PSF 15 PSF Application: Floor (Residential)

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

Load Sharing: No

Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	701	284	0	0
2	Vertical	690	283	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1-SPF	3.500"	Vert	19%	355 / 1051	1406	L	1.25D+1.5L
2-SPF	8.000"	Vert	8%	354 / 1035	1389	L	1.25D+1.5L

Analysis Results

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1413 ft-lb	1'9 1/2"	34261 ft-lb	0.041 (4%)	1.25D+1.5L	L
Unbraced	1413 ft-lb	1'9 1/2"	34261 ft-lb	0.041 (4%)	1.25D+1.5L	L
Shear	1246 lb	2'9 7/8"	11596 lb	0.107 (11%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/30689)	1'9 1/2"	0.121 (L/360)	0.012 (1%)	D	Uniform
LL Defl inch	0.004 (L/12275)	1'9 1/2"	0.091 (L/480)	0.039 (4%)	L	L
TL Defl inch	0.005 (L/8768)	1'9 1/2"	0.182 (L/240)	0.027 (3%)	D+L	L

LAMINATE WITH:

2 ROWS OF 3.25" AIR NAILS FACE SPACING AT 12 IN O/C. NAIL FROM LOADED FACE MIN HANGER NAILS: (JOIST/BEAM) 3 IN

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

0-10-1

1-9-8

0-0-0 to 0-2-6

0-4-3 to 3-9-9

- 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.

Load Type

Part. Uniform

Tie-In

Point

Point

- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.

Live Dead Snow Wind Comments POVINCE OF ONTARIO 15 PSF 40 PSF 0 PSF 0 PSF 0 PLF 0 PLF 27 PLF 70 PLF 115 lb 306 lb 0 lb 0 lb **J6** 160 lb 426 lb

0 lb

SEE GENERAL NOTES DOC: ME-TC02 V 03-2017 NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

100123373

MODULUS ENGINEERING LTD.

PROFESSIONAL CIL

Continued on page 2...

Notes

ID

2

3

4

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 information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

Trib Width

1-10-11

Side

Тор

Top

Near Face

Near Face

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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Forex APA: PR-L318

Manufacturer Info

0 lb F3







CORPORATION OF THE CITY OF OSHAWA ClientoF PERREENPARKIS Project: Dec 06 2023 L 3

6/2/2022 Date: ME0722-059 Input by: WC

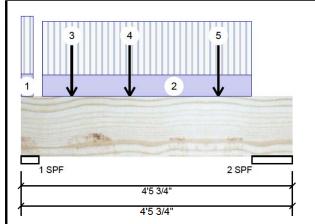
Job Name: PENROSE 1-EL 3 ZADORRA ESTATES

Level Gound Floor

ME22-5724-2

Page 2 of 21

F10-A Forex 2.0E-3000Fb LVL CHIEF 1/17/50** X 11.875 PASSED



11 7/8'

.Continued from page 1

ID Location Trib Width Wind Comments Load Type Side Live Dead Snow 3-3-1 151 lb 402 lb 0 lb 0 lb 5 Point Near Face J4 Self Weight 10 PLF

> MODULUS ENGINEERING LTD. PROFESSIONAL CHOSE DA CUESCO 100123373 ROVINCE OF ONTARIO SEE GENERAL NOTES DOC: ME-TC02 V 03-2017 NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

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

Handling & Installation

1. IVI. beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, 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 rotation

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 613-838-2775 / 905-642-4400





ClientoF PERREENBARKIS Project: Dec 06 2023

Date: 6/2/2022 Input by:

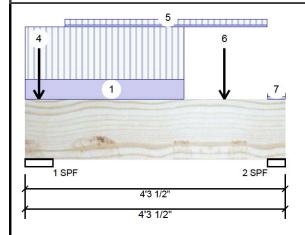
ME0722-059 WC

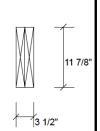
Job Name: PENROSE 1-EL 3 ME22-5724-3 Project #: ZADORRA ESTATES

Forex 2.0E-3000Fb LVL CHIEF 11:750*** 11.875









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Member Information

Туре:	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 lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	872	381	0	0
2	Vertical	684	276	0	0

Bearings and Factored Reactions

Bearing Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 5.500"	Vert	15%	476 / 1308	1784	L	1.25D+1.5L
2-SPF 3.500"	Vert	18%	345 / 1027	1371	L	1.25D+1.5L

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1330 ft-lb	2'2 1/2"	34261 ft-lb	0.039 (4%)	1.25D+1.5L	L
Unbraced	1330 ft-lb	2'2 1/2"	34261 ft-lb	0.039 (4%)	1.25D+1.5L	L
Shear	1980 lb	3' 1/8"	11596 lb	0.171 (17%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/31468)	2'2 5/8"	0.122 (L/360)	0.011 (1%)	D	Uniform
LL Defl inch	0.004 (L/12519)	2'2 5/8"	0.092 (L/480)	0.038 (4%)	L	L
TL Defl inch	0.005 (L/8956)	2'2 5/8"	0.183 (L/240)	0.027 (3%)	D+L	L

LAMINATE WITH:

2 ROWS OF 3.25" AIR NAILS FACE SPACING AT 12 IN O/C. NAIL FROM LOADED FACE MIN HANGER NAILS: (JOIST/BEAM) 3 IN

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.

15 PSF

- 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.

ı	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments WCF OF ONT
	1	Part. Uniform	0-0-0 to 2-7-8		Near Face	137 PLF	367 PLF	0 PLF	0 PLF	201
ı	2	Point	0-2-12		Тор	27 lb	0 lb	0 lb	0 lb	SEE GENERAL NOTES Wall Self Weight DOC: ME-TC02 V 03-2017
ı		Bearing Length	0-5-8							NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

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

LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastering details, beam strength values, and code
approvals
Damaged Beams must not be used

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318

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

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OFESSIONAL





CORPORATION OF THE CITY OF OSHAWA ClientoF PERRENPARKIS Project: Dec 06 2023

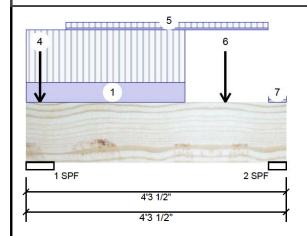
6/2/2022 Date:

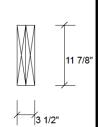
ME0722-059 WC Input by:

Job Name: PENROSE 1-EL 3 ZADORRA ESTATES ME22-5724-4

Page 4 of 21

Forex 2.0E-3000Fb LVL CHIEF PULT BOTTON 11.875 Level Ground Floor F10-B PASSED





Continued fron	n page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
3	Point	0-2-12		Тор	1 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
4	Point	0-2-12		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
5	Part. Uniform	0-7-15 to 3-11-15		Тор	15 PLF	40 PLF	0 PLF	0 PLF	
6	Point	3-3-8		Near Face	168 lb	448 lb	0 lb	0 lb	J5
7	Tie-In	4-0-0 to 4-3-8	1-0-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				



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Manufacturer Info Forex

APA: PR-L318

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 ClientoF PERREENBARKIS Project: Dec 06 2023 L 3

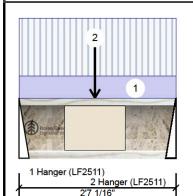
Date: 6/2/2022

ME0722-059 Input by: WC

Job Name: PENROSE 1-EL 3 ME22-5724-5 ZADORRA ESTATES

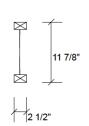
AJS 140 F1-A

Project #: Level Ground Floor



2'7 1/16

15 PSF



Wind

Page 5 of 21

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		

Unfactored Reactions UNPATTERNED Ib (Uplift) Direction Live

_					
1	Vertical	270	101	0	0
2	Vertical	255	96	0	0

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	555 ft-lb	1'3 1/16"	5305 ft-lb	0.105 (10%)	1.25D+1.5L	L
Unbraced	555 ft-lb	1'3 1/16"	5305 ft-lb	0.105 (10%)	1.25D+1.5L	L
Shear	524 lb	1 1/4"	2350 lb	0.223 (22%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/15698)	1'3 1/16"	0.079 (L/360)	0.023 (2%)	D	Uniform
LL Defl inch	0.005 (L/5887)	1'3 1/16"	0.059 (L/480)	0.082 (8%)	L	L
TL Defl inch	0.007 (L/4281)	1'3 1/16"	0.119 (L/240)	0.056 (6%)	D+L	L

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. Re	act D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	33%	126 / 405	531	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	31%	119 / 382	502	L	1.25D+1.5L

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.

ID Load Type Trib Width Side Live Wind Location Dead Snow 0-0-0 to 2-7-1 0-10-12 **15 PSF** 40 PSF 0 PSF 0 PSF Tie-In Top 1 2 Point 1-3-0 Far Face 162 lb 432 lb 0 lb 0 lb



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

Handling & Installation

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

2

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





CORPORATION OF THE CITY OF OSHAWA ClientoF PERREENBARKIS Project: Dec 06 2023 L 3

Date: 6/2/2022 Input by: WC

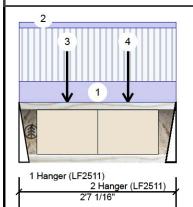
ME0722-059

Job Name: PENROSE 1-EL 3 ME22-5724-6 ZADORRA ESTATES

AJS 140 F1-B

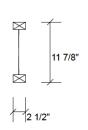
Level Ground Floor

Project #:



2'7 1/16

15 PSF



Wind

Page 6 of 21

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		

Unfactored Reactions UNPATTERNED lb (Uplift) Direction Live Dead

1	Vertical	360	211	0	0
2	Vertical	361	209	0	0

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	540 ft-lb	1'2 3/4"	5305 ft-lb	0.102 (10%)	1.25D+1.5L	L
Unbraced	540 ft-lb	1'2 3/4"	5305 ft-lb	0.102 (10%)	1.25D+1.5L	L
Shear	796 lb	1 1/4"	2350 lb	0.339 (34%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/11185)	1'3 1/8"	0.079 (L/360)	0.032 (3%)	D	Uniform
LL Defl inch	0.004 (L/6544)	1'3 7/16"	0.059 (L/480)	0.073 (7%)	L	L
TL Defl inch	0.007 (L/4129)	1'3 5/16"	0.119 (L/240)	0.058 (6%)	D+L	L

, alaryolo	/ totaai	Location	/ ulowed	Cupuoity	COIIID.	Ouco
Moment	540 ft-lb	1'2 3/4"	5305 ft-lb	0.102 (10%)	1.25D+1.5L	L
Unbraced	540 ft-lb	1'2 3/4"	5305 ft-lb	0.102 (10%)	1.25D+1.5L	L
Shear	796 lb	1 1/4"	2350 lb	0.339 (34%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/11185)	1'3 1/8"	0.079 (L/360)	0.032 (3%)	D	Uniform
LL Defl inch	0.004 (L/6544)	1'3 7/16"	0.059 (L/480)	0.073 (7%)	L	L
TL Defl inch	0.007 (L/4129)	1'3 5/16"	0.119 (L/240)	0.058 (6%)	D+L	L

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. Re	act D/L lb	Total	Ld. Case	Ld. Comb.
1 -	2.000"	Vert	50%	264 / 540	804	L	1.25D+1.5L
Hanger							
2 -	2.000"	Vert	50%	261 / 542	803	L	1.25D+1.5L
Hanger							

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. ID Load Type Location Trib Width Side Dead Live Wind Comments Snow 0-0-0 to 2-7-1 0-10-12 15 PSF 40 PSF 0 PSF 0 PSF Tie-In Top 1 Part. Uniform 0-0-0 to 2-7-1 Тор 4 PLF 0 PLF 0 PLF 0 PLF 2 3 **Point** 0-9-9 Far Face 191 lb 315 lb 0 lb 0 lb J4 1-9-9 Far Face 184 lb 314 lb 0 lb 0 lb Point



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Notes

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

Handling & Installation

- and ling & installation
 Loist flanges must not be cut or drilled
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 chart, bridging details, multi-ply fastening details and
 handlingferection details
 Damaged Lloists 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 poorling.

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

www.bc.com CCMC: 12787

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



This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products



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Date: 6/2/2022 ME0722-059 Input by: WC

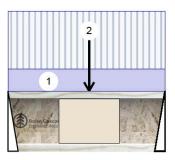
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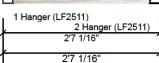
ZADORRA ESTATES

ME22-5724-7

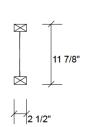
F1-C **AJS 140**

Project #: Level Ground Floor





15 PSF



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Member Information

Туре:	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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	204	76	0	0
2	Vertical	216	81	0	0

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	432 ft-lb	1'4 1/16"	5305 ft-lb	0.081 (8%)	1.25D+1.5L	L
Unbraced	432 ft-lb	1'4 1/16"	5305 ft-lb	0.081 (8%)	1.25D+1.5L	L
Shear	418 lb	2'5 13/16"	2350 lb	0.178 (18%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/20191)	1'4 1/16"	0.079 (L/360)	0.018 (2%)	D	Uniform
LL Defl inch	0.004 (L/7558)	1'4 1/16"	0.059 (L/480)	0.064 (6%)	L	L
TL Defl inch	0.005 (L/5500)	1'4 1/16"	0.119 (L/240)	0.044 (4%)	D+L	L

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. Re	act D/L lb	Total	Ld. Case	Ld. Comb.
1 -	2.000"	Vert	25%	96 / 306	402	L	1.25D+1.5L
Hanger							
2 -	2.000"	Vert	27%	101 / 324	426	L	1.25D+1.5L
Hanger							

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.

ID Load Type Location Trib Width Side Dead Live Wind Comments Snow 0-0-0 to 2-7-1 0-10-15 **15 PSF** 40 PSF 0 PSF 0 PSF Tie-In Top 1 2 Point 1-4-1 Near Face 122 lb 326 lb 0 lb 0 lb J2



ROVINCE OF ONTARIO SEE GENERAL NOTES DOC: ME-TC02 V 03-2017

NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

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

Handling & Installation

- Landling & Installation

 Losis flanges must not be cut or drilled

 Refer to latest copy of the Lloist product information details for framing details, stiffener tables, web hole chart, bridging details, multiply fastening details and handling/erection details

 Damaged Lloists 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 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





CORPORATION OF THE CITY OF OSHAWA ClientoF PERREENBARKIS Project: Dec 06 2023

Date: 6/2/2022

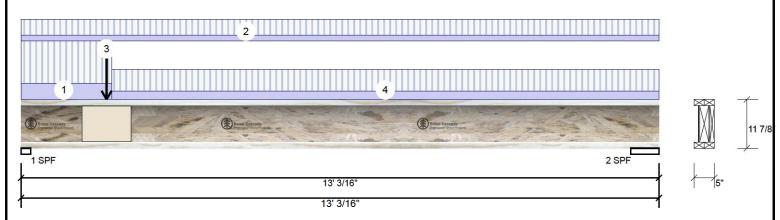
ME0722-059 Input by: WC

Job Name: PENROSE 1-EL 3 ME22-5724-8 Project #: ZADORRA ESTATES

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AJS 140 F2-A

evel Gound Floor



Member Information Unfactored Reactions UNPATTERNED Ib (Uplift) Type: Girder Application: Floor (Residential) Brg Direction Live Dead Snow Plies: 2 Design Method: LSD 1 Vertical 609 229 0 Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 2 Vertical 394 148 0 Deflection LL: 480 Load Sharing: No Deck: Not Checked	
Plies: 2 Design Method: LSD 1 Vertical 609 229 0 Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 2 Vertical 394 148 0 Deflection LL: 480 Load Sharing: No Vertical 394 148 0 Deflection TL: 240 Deck: Not Checked Vertical 394 148 0	
Moisture Condition: Dry Deflection LL: 480 Deflection TL: 240 Deck: Not Checked	Wind
Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked	0
Deflection TL: 240 Deck: Not Checked	0
and the second s	
Importance: Normal - II Vibration: Not Checked	
General Load	
Floor Live: 40 PSF Bearings and Factored Reactions	
Dead: 15 PSF Bearing Length Dir. Cap. React D/L lb Total Ld. Case Lo	. Comb.
1 - SPF 2.375" Vert 36% 286 / 914 1200 L 1.	25D+1.5L
2 - SPF 6.875" Vert 20% 185 / 591 775 L 1.	25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2480 ft-lb	5'7 9/16"	10610 ft-lb	0.234 (23%)	1.25D+1.5L	L
Unbraced	2480 ft-lb	5'7 9/16"	10610 ft-lb	0.234 (23%)	1.25D+1.5L	L
Shear	1178 lb	1 5/8"	4700 lb	0.251 (25%)	1.25D+1.5L	L
Perm Defl in	0.025 (L/5980)	6'1 1/8"	0.412 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.066 (L/2244)	6'1 1/8"	0.309 (L/480)	0.214 (21%)	L	L
TL Defl inch	0.091 (L/1632)	6'1 1/8"	0.619 (L/240)	0.147 (15%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.

6 Bottom flange must be laterally braced at a maximum of 11'3 1/4" o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Com
1	Tie-In	0-0-0 to 1-10-3	1-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-0-3	0-6-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-15		Far Face	96 lb	255 lb	0 lb	0 lb	F1
4	Tie-In	1-10-3 to 13-0-3	0-9-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

D. A. SHEDMAN D. A. SHERMAN 100123373 mments ROVINCE OF ONTARIO SEE GENERAL NOTES

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DOC: ME-TC02 V 03-2017 NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

Notes

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

Handling & Installation

- AGNOLING & INSTALIATION

 I. Justisf langes must not be cut or drilled

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

 Damaged Lloists 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 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





CORPORATION OF THE CITY OF OSHAWA ClientoF PERREENBARKIS Project: Dec 06 2023

Date: 6/2/2022 Input by:

Project #:

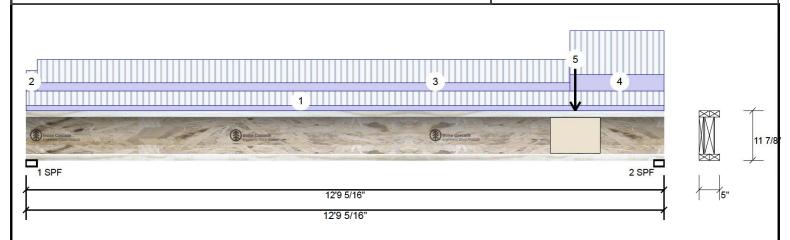
ME0722-059 WC

evel Gound Floor

Job Name: PENROSE 1-EL 3 ME22-5724-9 ZADORRA ESTATES

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F2-B **AJS 140**



Type: Girder Application: Floor (Residential) Eyr Direction Live Dead Snow Wind										
Plies: 2 Design Method: LSD 1 Vertical 348 130 0 0 0	Member Inforr	mation			Unf	actored Rea	actions UNP	ATTERNED I	b (Uplift)	
Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 2 Vertical 547 205 0 0 0 0 0 0 0 0 0	Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind
Deflection LL:	Plies:	2	Design Method:	LSD	1	Vertical	348	130	0	0
Defection TL: 240 Deck: Not Checked	Moisture Condition	: Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	547	205	0	0
Normal - II	Deflection LL:	480	Load Sharing:	No	1					
General Load Floor Live: 40 PSF Bearings and Factored Reactions Dead: 15 PSF Bearing Length Dir. Cap. React D/L b Total Ld. Case Ld. Comb. 1 - SPF 2.625" Vert 20% 163 / 522 685 L 1.25D+1.5L 2 - SPF 2.375" Vert 32% 256 / 821 1077 L 1.25D+1.5L 2 - SPF 2.375" Vert 32% 256 / 821 1077 L 1.25D+1.5L	Deflection TL:	240	Deck:	Not Checked	1					
Bearings and Factored Reactions Bearings and Factored Reactions Dead: 15 PSF Bearing Length Dir. Cap. React D/L b Total Ld. Case Ld. Comb. 1 - SPF 2.625" Vert 20% 163 / 522 685 L 1.25D+1.5L 2 - SPF 2.375" Vert 32% 256 / 821 1077 L 1.25D+1.5L	Importance:	Normal - II	Vibration:	Not Checked	1					
Dead: 15 PSF Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 2.625" Vert 20% 163 / 522 685 L 1.25D+1.5L 2 - SPF 2.375" Vert 32% 256 / 821 1077 L 1.25D+1.5L	General Load				<u> </u>					
1 - SPF 2.625" Vert 20% 163 / 522 685 L 1.25D+1.5L 2 - SPF 2.375" Vert 32% 256 / 821 1077 L 1.25D+1.5L	Floor Live:	40 PSF			Bea	rings and F	actored Rea	ctions		
2 - SPF 2.375" Vert 32% 256 / 821 1077 L 1.25D+1.5L	Dead:	15 PSF			Be	aring Length	Dir. Cap	. React D/L lb	Total Ld. Case	Ld. Comb.
					1-	SPF 2.625"	Vert 20%	163 / 522	685 L	1.25D+1.5L
					2-	SPF 2.375"	Vert 32%	256 / 821	1077 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2309 ft-lb	7' 1/16"	10610 ft-lb	0.218 (22%)	1.25D+1.5L	L
Unbraced	2309 ft-lb	7' 1/16"	10610 ft-lb	0.218 (22%)	1.25D+1.5L	L
Shear	1056 lb	12'7 11/16"	4700 lb	0.225 (22%)	1.25D+1.5L	L
Perm Defl in.	0.023 (L/6395)	6'7 1/4"	0.416 (L/360)	0.056 (6%)	D	Uniform
LL Defl inch	0.063 (L/2396)	6'7 1/4"	0.312 (L/480)	0.200 (20%)	L	L
TL Defl inch	0.086 (L/1743)	6'7 1/4"	0.624 (L/240)	0.138 (14%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.

6 Bottom flange must be laterally braced at a maximum of 11' o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Co
1	Tie-In	0-0-0 to 12-9-5	0-5-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 10-10-12	0-9-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	10-10-12 to 12-9-5	1-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	11-0-0		Near Face	76 lb	204 lb	0 lb	0 lb	F1

D. A. SHEDMAN D. A. SHERMAN 100123373 comments ROVINCE OF ONTARIO SEE GENERAL NOTES

MODULUS ENGINEERING LTD.

Notes

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

 I. Justisf langes must not be cut or drilled

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 Damaged Lloists 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 poorling

This design is valid until 5/24/2024

Manufacturer Info

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Boise, ID 83702 (800) 232-0788 www.bc.com CCMC: 12787

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CORPORATION OF THE CITY OF OSHAWA ClientoF PERREENBARKIS Project: Dec 06 2023

6/2/2022 Date: ME0722-059 Input by: WC

evel Gound Floor

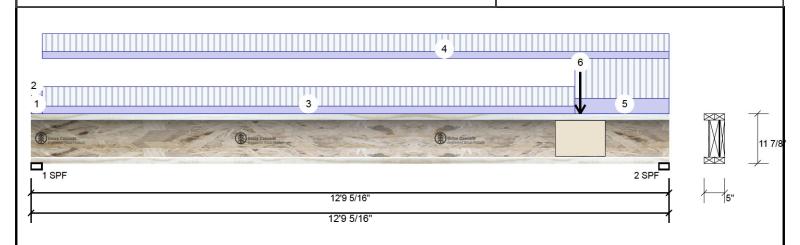
Project #:

Job Name: PENROSE 1-EL 3 ZADORRA ESTATES

ME22-5724-10

Page 10 of 21

F2-C **AJS 140**



Member Inform	nation			Unfactored Reactions UNPATTERNED lb (Uplift)						
Type:	Girder	Application:	Floor (Residential)	Brg	Direction	Live	Dead	Snow	Wind	
Plies:	2	Design Method:	LSD	1	Vertical	390	146	0	0	
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012	2	Vertical	603	226	0	0	
Deflection LL:	480	Load Sharing:	No	1						
Deflection TL:	240	Deck:	Not Checked	1						
Importance:	Normal - II	Vibration:	Not Checked	1						
General Load				<u> </u>						
Floor Live:	40 PSF			Bea	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 2.625"	Vert 22	% 183 / 585	768 L	1.25D+1.5L	
				2 -	SPF 2.375"	Vert 35	% 283 / 905	1188 L	1.25D+1.5L	
Analysis Results										

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2587 ft-lb	6'11 5/8"	10610 ft-lb	0.244 (24%)	1.25D+1.5L	L
Unbraced	2587 ft-lb	6'11 5/8"	10610 ft-lb	0.244 (24%)	1.25D+1.5L	L
Shear	1165 lb	12'7 11/16"	4700 lb	0.248 (25%)	1.25D+1.5L	L
Perm Defl in	0.026 (L/5706)	6'7 1/8"	0.416 (L/360)	0.063 (6%)	D	Uniform
LL Defl inch	0.070 (L/2140)	6'7 1/8"	0.312 (L/480)	0.224 (22%)	L	L
TL Defl inch	0.096 (L/1556)	6'7 1/8"	0.624 (L/240)	0.154 (15%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.

6 Bottom flange must be laterally braced at a maximum of 11' o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Con
1	Tie-In	0-0-0 to 0-2-10	0-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-4-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 10-10-12	0-8-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-2-10 to 12-9-5	0-8-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-10-12 to 12-9-5	1-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	11-0-0		Far Face	81 lb	216 lb	0 lb	0 lb	F1

D. A. SHEDMAN 100123373 comments ROVINCE OF ONTARIO

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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
 Upist not to be treated with fire retardant or corrosive
- Handling & Installation
- Handling & Installation

 1. Joist flanges must not be cut or drilled

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

 3. Damaged IJoists must not be used

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

- 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

Manufacturer Info

Boise Cascade Wood Products 1111 W. Jefferson St.

www.bc.com CCMC: 12787

Boise, ID 83702 (800) 232-0788

Kott Inc.

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



This design is valid until 5/24/2024



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Date: 6/2/2022 ME0722-059 Input by:

WC Job Name: PENROSE 1-EL 3 ZADORRA ESTATES

ME22-5724-11

Snow

0

0

Wind

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

0

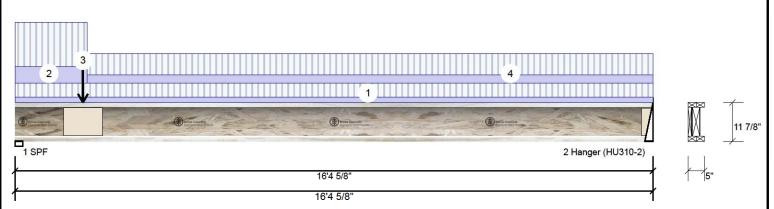
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AJS 140 F₃-A



Project #:



Hanger

Member Information **Unfactored Reactions UNPATTERNED lb (Uplift)** Type: Application: Floor (Residential) Brg Direction Live Dead Plies: 2 Design Method: LSD 693 260 Vertical Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 Vertical 426 160 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 325 / 1040 1 - SPF 2.375" Vert 40% 1364 L 2 -2.500" Vert 18% 200 / 639 839 L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3576 ft-lb	7'6 7/8"	10610 ft-lb	0.337 (34%)	1.25D+1.5L	L
Unbraced	3576 ft-lb	7'6 7/8"	10610 ft-lb	0.337 (34%)	1.25D+1.5L	L
Shear	1343 lb	1 5/8"	4700 lb	0.286 (29%)	1.25D+1.5L	L
Perm Defl in.	0.057 (L/3386)	7'11 7/8"	0.537 (L/360)	0.106 (11%)	D	Uniform
LL Defl inch	0.152 (L/1269)	7'11 7/8"	0.403 (L/480)	0.378 (38%)	L	L
TL Defl inch	0.209 (L/923)	7'11 7/8"	0.805 (L/240)	0.260 (26%)	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 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum
- 7 Bottom flange must be laterally braced at a maximum of 14'7 11/16" o.c.
- 8 Web stiffeners required at Rearing 2

o web sui	ieriers required at bear	ilig 2.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Commer
1	Tie-In	0-0-0 to 16-4-10	0-5-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-10-3	1-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-15		Near Face	101 lb	270 lb	0 lb	0 lb	F1
4	Tie-In	1-10-3 to 16-4-10	0-8-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

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MODULUS ENGINEERING LTD.

PROFESSIONAL CONTRACTOR

100123373

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
 Upoint not to be treated with fire retardant or corrosive
- Handling & Installation
- Libit flanges must not be cut or drilled Refer to latest copy of the Lloist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling-ferection details Damaged Lloists 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 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 613-838-2775 / 905-642-4400



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Date: 6/2/2022 ME0722-059 Input by: WC

Project #:

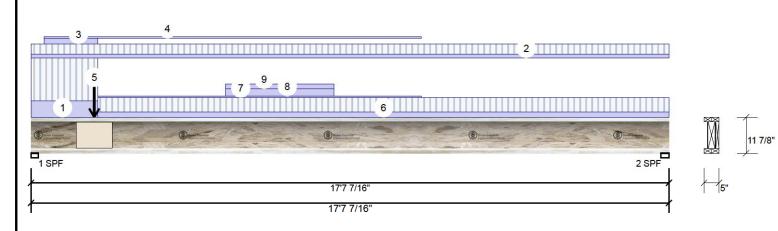
Job Name: PENROSE 1-EL 3

ZADORRA ESTATES evel Gound Floor

ME22-5724-12

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AJS 140 F3-B



Member Information Unfactored Reactions UNPATTERNED Ib (Uplift) Type: Application: Floor (Residential) Brg Direction Live Dead Snow Wind Plies: 2 Design Method: LSD 699 397 Vertical 0 0 Moisture Condition: Dry **Building Code:** NBCC 2015 / OBC 2012 Vertical 338 167 0 0 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. 46% 496 / 1048 1545 L 1.25D+1.5L 1 - SPF 2.375" Vert 2 - SPF 2.625" Vert 21% 209 / 507 716 L 1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3658 ft-lb	7'5 7/8"	10610 ft-lb	0.345 (34%)	1.25D+1.5L	L
Unbraced	3658 ft-lb	7'5 7/8"	10610 ft-lb	0.345 (34%)	1.25D+1.5L	L
Shear	1525 lb	1 5/8"	4700 lb	0.324 (32%)	1.25D+1.5L	L
Perm Defl in.	0.091 (L/2289)	8'3 7/16"	0.578 (L/360)	0.157 (16%)	D	Uniform
LL Defl inch	0.156 (L/1330)	8'5 3/4"	0.433 (L/480)	0.361 (36%)	L	L
TL Defl inch	0.247 (L/841)	8'4 15/16"	0.866 (L/240)	0.285 (29%)	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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.

6 Bottom flange must be laterally braced at a maximum of 15'10 7/16" o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-10-3	1-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	1
2	Tie-In	0-0-0 to 17-7-7	0-4-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-6 to 1-10-3		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-6 to 10-9-7		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-15		Far Face	209 lb	361 lb	0 lb	0 lb	F1

Continued on page 2...

Notes

Handling & Installation

- Libit flanges must not be cut or drilled Refer to latest copy of the Lloist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling-ferection details Damaged Lloists 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 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 613-838-2775 / 905-642-4400

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O7/14/2022



CSD DESIGN

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
 Upoint not to be treated with fire retardant or corrosive



CORPORATION OF THE CITY OF OSHAWA Clientor PERRENDARKIS Project: Dec 06 2023

6/2/2022 Date: ME0722-059 WC Input by:

Project #:

Job Name: PENROSE 1-EL 3

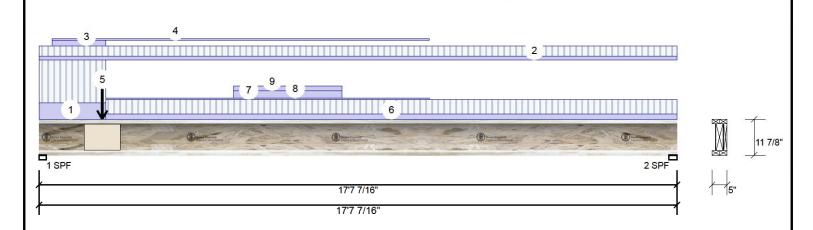
ZADORRA ESTATES Level Gound Floor

ME22-5724-13

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F3-B **AJS 140**

Continued from page 1



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tie-In	1-10-3 to 17-7-7	0-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-10-3 to 10-9-6		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
8	Part. Uniform	5-4-7 to 8-4-6		Тор	10 PLF	0 PLF	0 PLF	0 PLF	
9	Part. Uniform	5-4-7 to 8-4-6		Тор	7 PLF	0 PLF	0 PLF	0 PLF	



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

Lumber

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

Handling & Installation

- Handling & Installation

 1. Jusist flanges must not be cut or drilled

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

 3. Damaged Libists 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 lengthe=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

Kott Inc.



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Date: 6/2/2022 ME0722-059

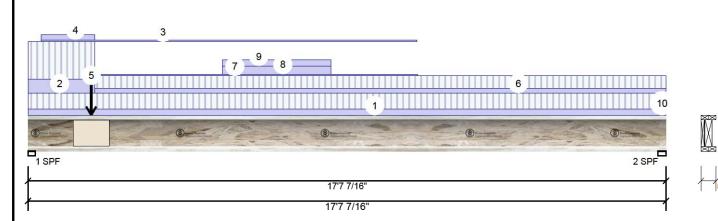
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evel Gound Floor

Job Name: PENROSE 1-EL 3 ME22-5724-14 Project #: ZADORRA ESTATES

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F3-C **AJS 140**



Floor (Residential)

NBCC 2015 / OBC 2012

LSD

No

Not Checked

Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	800	461	0	0
2	Vertical	440	219	0	0

Bearings and Factored Reactions

Bearing L	ength.	Dir.	Cap. Re	eact D/L lb	Total	Ld. Case	Ld. Comb.
1-SPF 2	.375"	Vert	53%	576 / 1201	1777	L	1.25D+1.5L
2-SPF 2	.625"	Vert	27%	273 / 659	933	L	1.25D+1.5L

Analysis Results

Member Information

Moisture Condition: Dry

Deflection LL:

Deflection TL:

General Load

Importance:

Floor Live:

Dead:

2

480

240

Normal - II

40 PSF 15 PSF

Type: Plies:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4654 ft-lb	7'8 1/2"	10610 ft-lb	0.439 (44%)	1.25D+1.5L	L
Unbraced	4654 ft-lb	7'8 1/2"	10610 ft-lb	0.439 (44%)	1.25D+1.5L	L
Shear	1754 lb	1 5/8"	4700 lb	0.373 (37%)	1.25D+1.5L	L
Perm Defl in.	0.117 (L/1784)	8'4 1/8"	0.578 (L/360)	0.202 (20%)	D	Uniform
LL Defl inch	0.197 (L/1054)	8'6 5/8"	0.433 (L/480)	0.456 (46%)	L	L
TL Defl inch	0.314 (L/662)	8'5 5/8"	0.866 (L/240)	0.362 (36%)	D+L	L

Application:

Design Method:

Building Code:

Load Sharing:

Deck:

Vibration:

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

6 Bottom flange must be laterally braced at a maximum of 15'10 7/16" o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	C
1	Tie-In	0-0-0 to 17-4-13	0-7-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-10-3	1-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-6 to 10-8-15		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-6 to 1-10-3		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-15		Near Face	211 lb	360 lb	0 lb	0 lb	F

F1

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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
 Upoint not to be treated with fire retardant or corrosive
- Handling & Installation
- Landling & Installation

 Losis flanges must not be cut or drilled

 Refer to latest copy of the Lloist product information details for framing details, stiffener tables, web hole chart, bridging details, multiply fastening details and handling/erection details

 Damaged Lloists 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 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

Kott Inc.

CSD DESIGN





CORPORATION OF THE CITY OF OSHAWA Clientor PERRENDARKIS Project: Dec 06 2023 L 3

6/2/2022 Date: ME0722-059

WC Input by: Job Name: PENROSE 1-EL 3

ZADORRA ESTATES

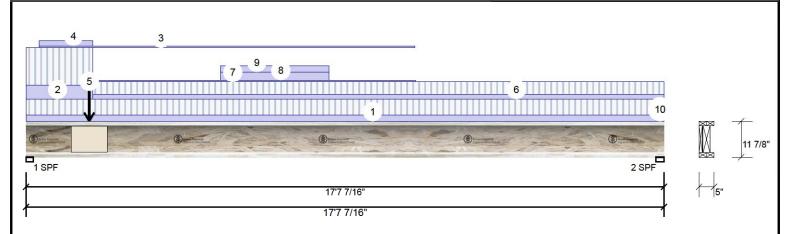
ME22-5724-15

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F3-C **AJS 140**

Level Gound Floor

Project #:



ŀ·	Continued from page 1											
l	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments		
l	6	Tie-In	1-10-3 to 17-7-7	0-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF			
l	7	Part. Uniform	1-10-3 to 10-9-0		Тор	3 PLF	0 PLF	0 PLF	0 PLF			
l	8	Part. Uniform	5-4-7 to 8-4-6		Тор	13 PLF	0 PLF	0 PLF	0 PLF			
l	9	Part. Uniform	5-4-7 to 8-4-6		Тор	10 PLF	0 PLF	0 PLF	0 PLF			
	10	Tie-In	17-4-13 to 17-7-7	0-5-12	Top	15 PSF	40 PSF	0 PSF	0 PSF			



NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

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

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

Handling & Installation

- Handling & Installation

 1. Jusist flanges must not be cut or drilled

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

 3. Damaged Libists 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

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Kott Inc.







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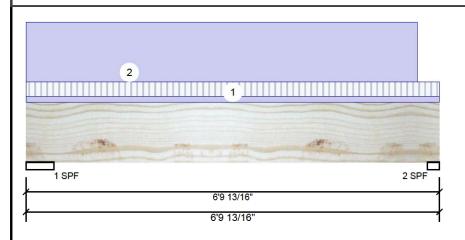
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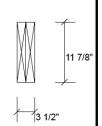
Job Name: PENROSE 1-EL 3 Project #: ZADORRA ESTATES

ME22-5724-16

Forex 2.0E-3000Fb LVL

vel Gound Floor





0

0

Wind

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

0

0

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Unfactored Reactions UNPATTERNED Ib (Uplift) Member Information Floor (Residential) Type: Application: Brg Direction Live Dead Snow Plies: Design Method: LSD 342 Vertical 68 Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 Vertical 63 288 Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Vibration: Not Checked General Load Bearings and Factored Reactions Floor Live: 40 PSF 15 PSF Dead: Bearing Length Dir. Cap. React D/L lb Total Ld. Case 1-SPF 5.500" 428 / 102 530 L Vert 7%

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	739 ft-lb	3'6 7/16"	22612 ft-lb	0.033 (3%)	1.25D+1.5L	L
Unbraced	739 ft-lb	3'6 7/16"	22612 ft-lb	0.033 (3%)	1.25D+1.5L	L
Shear	325 lb	5'7 9/16"	7653 lb	0.043 (4%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/15727)	3'6 7/16"	0.210 (L/360)	0.023 (2%)	D	Uniform
LL Defl inch	0.001 (L/79075)	3'6 1/2"	0.157 (L/480)	0.006 (1%)	L	L
TL Defl inch	0.006 (L/13118)	3'6 7/16"	0.314 (L/240)	0.018 (2%)	D+L	L

TOP LOADED LAMINATE WITH:

Vert

13%

361 / 94

Comments

Wind

455 L

2 - SPF 2.375"

2 ROWS OF 3.25" AIR NAILS FACE SPACING AT 12 IN O/C. NAIL FROM ONE FACE

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

- 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 bearings. Load Type
- 7 Lateral slenderness ratio based on full section width.

-					
1	Tie-In	0-0-0 to 6-9-13	0-5-12	Тор	
2	Part. Uniform	0-0-0 to 6-5-8		Тор	

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POVINCE OF ONTER 40 PSF 15 PSF 0 PSF 0 PSF Wall Self Weight 80 PLF 0 PLF 0 PLF 0 PLF SEE GENERAL NOTES 10 PLF DOC: ME-TC02 V 03-2017 Self Weight NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

Dead

Live

ID

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 information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

Trib Width

Side

- Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Forex APA: PR-L318

Manufacturer Info

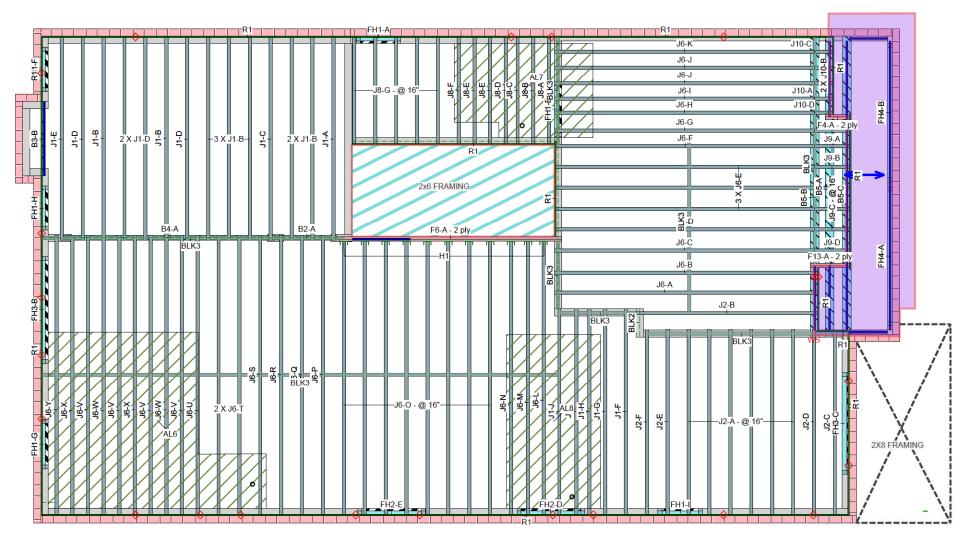
Snow

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





MHP 23018



Second										JOB INFORMAT								
LVL/LS Label	Descr		Width	De	pth	Qty	Plies	Pcs	Length	Builder								
F6	Forex	iption	1.75		875	1	2	2	16-0-0	GREENPARK								
5,197,967	2.0E-3	000Fb LVL	1000000	33.11.200		1000	100000	25062	Date. Revision	Project								
F13	Forex 2.0E-3	000Fb LVL	1.7	5 11.8	875	1	2	2	4-0-0	ZADORRA ESTAT								
F4	Forex 2.0E-3	000Fb LVL	1.7	5 11.8	875	1	2	2	2-0-0	Shipping PENROSE 1- EL 3								
l Joist (Flush)									OSHAWA,ON								
Label	Descr	iption	Width	n De	pth	Qty	Plies	Pcs	Length	Sales Rep								
J6	AJS 14	10	2.5	5 11.8	875			41	18-0-0	RALPH MIRIGELL								
J1	AJS 14	10	2.5	5 11.8	875			19	14-0-0	Designer								
J2	AJS 14	10	2.5	5 11.8	875			11	12-0-0	wc								
J8	AJS 14	10	2.5	5 11.8	875			12	8-0-0	Plotted								
J9	AJS 14		2.5		875			7	4-0-0	June 02, 2022								
J10	AJS 14	10	2.5	5 11.8	875			5	2-0-0									
Rim Bo	ard									Layout Name								
Label	Descr	iption	Width	n De	Depth		Plies	Pcs	Length	PENROSE 1-EL 3								
R1		d Rimboard	1.12	5 11.8	875			16	12-0-0	Job Path								
	Plus 1.125 X		Plus 1.125 X 11.875						Plus 1.125 X							16		DESIGN CRITERIA
Blockin										Second Floor								
Label	_	iption	Width	n De	pth	Qty	Plies	Pcs	Length	Design Method								
BLK3	AJS 14		2.5			LinFt		Varies	87-0-0	Building Code								
Hanger	-			ı						1								
Beam/Girder Supported									Floor									
									ember	Loads								
Label	Pcs	Descriptio	n	Skew	Slope	fa	steners	fas	teners	Live								
H1	11	LF2511			_ ·		12 10d	1 #8x	1 1/4WS	Dead								
										12 - 2								

	JOB INFORMATION
ength 6-0-0	Builder GREENPARK
	Project
4-0-0	ZADORRA ESTATES
2-0-0	Shipping PENROSE 1- EL 3 OSHAWA,ON
ength 8-0-0	Sales Rep RALPH MIRIGELLO
4-0-0	Designer
2-0-0	w c
8-0-0	Plotted
4-0-0	June 02, 2022
2-0-0	Layout Name
ength	PENROSE 1-EL 3 & DECK CONDITION
2-0-0	Job Path

econd Floor LSD (Canada) esign Method NBCC 2015 / OBC 2012 uilding Code loor

oads 15 ead Deflection Joist 480 LL Span L/ 240 TL Span L/ **Deflection Flush Girder** LL Span L/ 480 TL Span L/ 240 **Deflection Dropped Girder** 480 LL Span L/ TL Span L/ 240 Deflection Header 480 LL Span L/ 240 TL Span L/ 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 Contario 613-838-2775 / 905-642-4400

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

on the side of the applied load

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.

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



-WS

PS

Legend

In Hanger Label Denotes Web Stiffene

Point Load Support Load from Above

Wall Opening

Norbord Rimboard Plus 1.125 X 11.875 AJS 140 11.875

Forex 2.0E-3000Fb LVL 1.75 X 11.875



ClientoF PERREENBARKIS Project: Dec 06 2023

Date: 6/2/2022 ME0722-059 Input by: WC

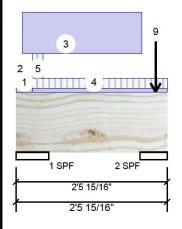
Job Name: PENROSE 1-EL 3 ZADORRA ESTATES

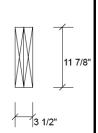
ME22-5724-17

Page 17 of 21

F13-A Forex 2.0E-3000Fb LVL

Level Second Floor





Member Information									
Type:	Girder	1							
Plies:	2	[
Moisture Condition:	Dry	E							
Deflection LL:	480	lι							
Deflection TL:	240	[
Importance:	Normal - II	I١							

40 PSF

15 PSF

Application: Floor (Residential) Design Method: LSD Building Code: NBCC 2015 / OBC 2012

Load Sharing: No Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	33	120	0	0
2	Vertical	23	139	40	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. R	leact D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.500"	Vert	2%	150 / 50	200	L	1.25D+1.5L
2 - SPF	5.375"	Vert	3%	174 / 83	257	L	1.25D+1.5S +L

Analysis Results

General Load

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	50 ft-lb	1'3 1/2"	22955 ft-lb	0.002 (0%)	1.25D+1.5L	L
Unbraced	50 ft-lb	1'3 1/2"	22955 ft-lb	0.002 (0%)	1.25D+1.5L	L
Shear	24 lb	1'6 3/8"	7769 lb	0.003 (0%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/187204)	1'3 9/16"	0.054 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/945167)	1'3 9/16"	0.041 (L/480)	0.001 (0%)	L+0.5S	L
TL Defl inch	0.000 (L/156255)	1'3 9/16"	0.081 (L/240)	0.002 (0%)	D+L+0.5S	L

TOP LOADED LAMINATE WITH:

2 ROWS OF 3.25" AIR NAILS FACE SPACING AT 12 IN O/C.

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 bearings.
- 7 Lateral slenderness ratio based on full section width.

NAIL FROM ONE FACE



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments 70
1	Tie-In	0-0-0 to 0-3-4	0-5-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	NCE OF ON
2	Tie-In	0-0-0 to 0-3-4	0-2-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	SEE GENERAL NOTES
3	Part. Uniform	0-1-4 to 2-0-14		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight DOC: ME-TC02 V 03-2017
4	Tie-In	0-3-4 to 2-5-15	0-5-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

Continued on page 2...

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

landling & Installation

LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastering details, beam strength values, and code
approvals
Damaged Beams must not be used

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318







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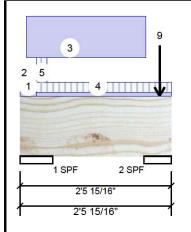
6/2/2022 Date: ME0722-059 WC

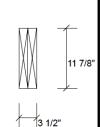
Input by:

Job Name: PENROSE 1-EL 3 ZADORRA ESTATES ME22-5724-18

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F13-A Forex 2.0E-3000Fb LVL CHIEF JULY SOFF W. 11.875 PASSED Level Second Floor





Continued fro	om page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	0-3-4 to 0-5-6	0-10-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	2-3-10		Тор	10 lb	0 lb	33 lb	0 lb	
	Bearing Length	0-5-8							
7	Point	2-3-10		Тор	38 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Point	2-3-10		Тор	2 lb	0 lb	7 lb	0 lb	
	Bearing Length	0-5-8							
9	Point	2-3-10		Тор	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				10 PLF				



Notes
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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 cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, 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 rotation
- 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 613-838-2775 / 905-642-4400





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Project: Dec 06 2023
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Date: 6/2/2022 Input by: W C ME0722-059

Job Name: PENROSE 1-EL 3
Project #: ZADORRA ESTATES

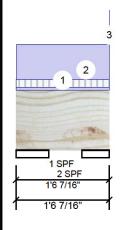
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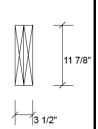
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F4-A Forex 2.0E-3000Fb

b LVL CHIEF BYILD NO OF SCIAL 1 875"

124Flyd-PASSES (Dvell Segred Floor





Wind

Member Information Unfa Type: Girder Application: Floor (Residential) Brg Plies: 2 Design Method: LSD 1 Moisture Condition: Dry Building Code: NBCC 2015 / OBC 2012 2

480 Lo
240 De

Importance: Normal - II
General Load

Floor Live: 40 PSF Dead: 15 PSF Building Code: NBCC 2015 / OBC 2012 Load Sharing: No

Load Sharing: No
Deck: Not Checked
Vibration: Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg Direction Live Dead Snow

1 Vertical 14 77 0 0 2 Vertical 13 69 0 0

Bearings and Factored Reactions

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 6.500" 1% 97 / 21 118 L 1.25D+1.5L Vert 2 - SPF 5.375" Vert 1% 87 / 19 105 L 1.25D+1.5L

Analysis Results

Deflection LL:

Deflection TL:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8 ft-lb	9 13/16"	22269 ft-lb	0.000 (0%)	1.25D+1.5L	L
Unbraced	8 ft-lb	9 13/16"	22269 ft-lb	0.000 (0%)	1.25D+1.5L	L
Shear	42 lb	1'6 3/8"	7537 lb	0.006 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/520794)	9 13/16"	0.022 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/2886215)	9 13/16"	0.017 (L/480)	0.000 (0%)	L	L
TL Defl inch	0.000 (L/441186)	9 13/16"	0.034 (L/240)	0.001 (0%)	D+L	L

TOP LOADED LAMINATE WITH:

2 ROWS OF 3.25" AIR NAILS FACE SPACING AT 12 IN O/C. NAIL FROM ONE FACE

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 have sheathing attached or be continuously braced.

7 Lateral slenderness ratio based on full section width.

Live Snow Wind Comments

/ Lateral Sient	acinicoo nado basca ciri	an occion main.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-7	0-5-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	NCE OF ON
2	Part. Uniform	0-0-2 to 1-6-7		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight SEE GENERAL NOTES
3	Part. Uniform	1-6-7 to 1-6-7		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight DOC: ME-TC02 V 03-2017
	Self Weight				10 PLF				NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

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.

Lumbe

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

Handling & Installation

L. IVI. beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
 Damaged Beams must not be used

Damaged Beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Forex APA: PR-L318

Manufacturer Info

Kott Inc. 3228 Moodie Dr, Ottawa, Ontario

613-838-2775 / 905-642-4400

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Clientof PERRENPARKS
Project: Dec 06 2023
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Date: 6/2/2022 Input by: W C ME0722-059

Job Name: PENROSE 1-EL 3
Project #: ZADORRA ESTATES

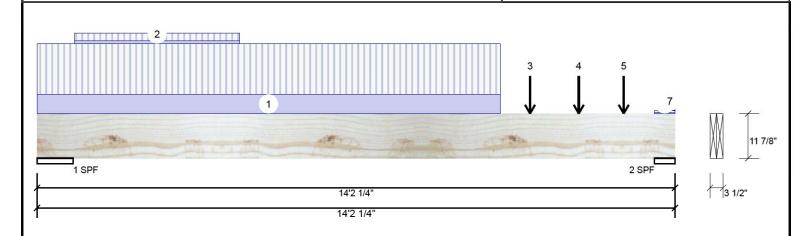
ME22-5724-20

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F6-A Forex 2.0E-3000Fb LVL

HIPF P7/15/03-05 XC141.875" \2/





Member Inforn	nation			Unf	acto
Type:	Girder	Application:	Floor (Residential)	Brg	Dir
Plies:	2	Design Method:	LSD	1	Ver
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012	2	Ver
Deflection LL:	480	Load Sharing:	No	1	
Deflection TL:	240	Deck:	Not Checked	1	
Importance:	Normal - II	Vibration:	Not Checked	1	
General Load				—	
Floor Live:	40 PSF			Bea	ring
Dead:	15 PSF			Bea	aring

Unfactored Reactions UNPATTERNED lb (Uplift) Brg Direction Live Dead Snow

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	2745	1108	0	0
2	Vertical	2225	944	0	0
1					

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1-SPF	9.625"	Vert	27%	1385 / 4118	5503	L	1.25D+1.5L
2 - SPF	5.500"	Vert	38%	1180 / 3338	4517	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15494 ft-lb	7'2"	34261 ft-lb	0.452 (45%)	1.25D+1.5L	L
Unbraced	15494 ft-lb	7'2"	34261 ft-lb	0.452 (45%)	1.25D+1.5L	L
Shear	5184 lb	12'8 7/8"	11596 lb	0.447 (45%)	1.25D+1.5L	L
Perm Defl in.	0.108 (L/1452)	7'3"	0.435 (L/360)	0.248 (25%)	D	Uniform
LL Defl inch	0.264 (L/593)	7'2 13/16"	0.326 (L/480)	0.809 (81%)	L	L
TL Defl inch	0.372 (L/421)	7'2 7/8"	0.653 (L/240)	0.570 (57%)	D+L	L

LAMINATE WITH:

2 ROWS OF 3.25" AIR NAILS FACE SPACING AT 12 IN O/C. NAIL FROM LOADED FACE MIN HANGER NAILS: (JOIST/BEAM) 3 IN

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 have sheathing attached or be continuously braced.
- 7 Lateral alanderness ratio based on full section width

/ Lateral sier	nderness ratio based o	n tuli section wiath.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Com
1	Part. Uniform	0-0-0 to 10-3-9		Near Face	134 PLF	356 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-10-0 to 4-6-1		Тор	20 PLF	54 PLF	0 PLF	0 PLF	
3	Point	10-11-9		Near Face	171 lb	416 lb	0 lb	0 lb	J6
4	Point	12-0-9		Near Face	153 lb	359 lb	0 lb	0 lb	J6
5	Point	13-0-9		Near Face	135 lb	320 lb	0 lb	0 lb	J6
Continued on pa	age 2								

D. A. SHERMAN 100123373

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SEE GENERAL NOTES DOC: ME-TC02 V 03-2017

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Notes

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Lumber

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

chemicals

Handling & Installation

I. UV. beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvate
 Damaged Beams must not be used

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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info Forex APA: PR-L318





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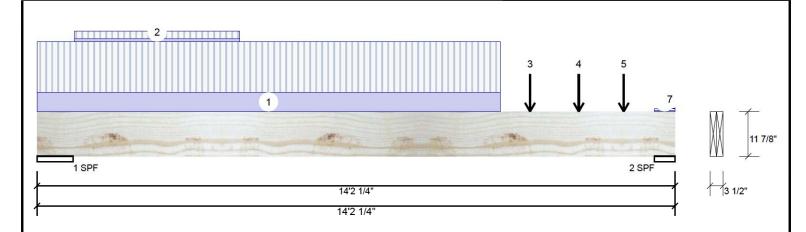
6/2/2022 Date: ME0722-059 WC Input by:

Job Name: PENROSE 1-EL 3 ZADORRA ESTATES

ME22-5724-21

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Forex 2.0E-3000Fb LVL CHIEF BYILD MOID FYCIAL 1 875" Level Second Floor -IPASSED



..Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tie-In	13-8-12 to 14-2-4	0-4-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Tie-In	13-9-14 to 14-2-4	0-3-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				



Notes
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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 cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, 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 rotation

For flat roofs provide proper drainage to prevent ponding

Forex

APA: PR-L318

Manufacturer Info

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This design is valid until 5/24/2024

