



Engineering Notes: EWP-Floors



MHP 23029

PLEASE READ ALL NOTES PRIOR TO INSTALLATION OF THE COMPONENT

RESPONSIBILITIES

THE RESPONSIBILITY OF THE UNDERSIGNED ENGINEER IS ONLY LIMITED TO THE CALCULATION OF THIS BUILDING COMPONENT FOR THE LOADS AND CONDITIONS SHOWN ON THIS DRAWING.

THE RESPONSIBILITY OF THE UNDERSIGNED IS LIMITED TO THE VERIFICATION OF THE STRUCTURAL CAPACITY OF THE FLOOR JOISTS AND LVL BEAMS BASED ON PLACEMENT AS SHOWN ON THE LAYOUT. THE LOADS APPLIED ARE LIMITED TO THE GRAVITY EFFECTS OF THE SPECIFIED LOADS. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE EFFECT OF WIND, UPLIFT, SEISMIC, LATERAL OR OTHER FORCES, CALCULATION OF ADEQUATE SUPPORT AND ANCHORAGE OF COMPONENTS, AS WELL AS THE DIMENSIONS AND DESIGN LOADS USED TO CALCULATE COMPONENTS ARE THE RESPONSIBILITY OF THE OVERALL BUILDING DESIGNER. FLOOR JOISTS AND OSB RIM BOARD ARE DESIGNED TO CARRY UNIFORMLY DISTRIBUTED LOADS ONLY. POINT LOADS SHOULD BE TRANSFERRED THROUGH THE FLOOR CAVITY WITH TRANSFER BLOCKS. STRUCTURAL ELEMENTS SUCH AS WALLS, POSTS, CONNECTORS, AND TRANSFER BLOCKS ARE THE RESPONSIBILITY OF THE OVERALL BUILDING DESIGNER.

THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF BEING FURNISHED FAULTY OR INCORRECT INFORMATION, SPECIFICATIONS AND/OR DESIGNS.

COMPONENT DESIGN INFORMATION

1. THIS BUILDING COMPONENT IS CERTIFIED AS AN INDIVIDUAL COMPONENT FOR THE LOADS AND CONDITIONS SHOWN ON THE CALCULATION PAGE BASED ON INFORMATION PROVIDED BY KOTT DESIGN.
2. THE BUILDING COMPONENT USED IN CONSTRUCTION MUST BE THE SAME AS INDICATED ON THE DRAWINGS.
3. UNLESS NOTED OTHERWISE ON THE LAYOUT OR BEAM CALCULATION SHEET, MEMBERS CONSISTING OF MULTIPLE PLIES MUST BE CONNECTED AS PER THE DOCUMENT "MULTIPLE MEMBER CONNECTION DETAILS" SHOWN ON PAGE 2 OF THIS DOCUMENT.
4. PASS-THRU TRANSFER BLOCK FRAMING IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.
5. IT IS ASSUMED THAT EACH LVL BEAM WHERE NOT SEATED IN A HANGER IS ATTACHED USING (4) FOUR 3-1/4" COMMON SPIRAL NAILS FOR UP TO 5.5" LONG BEARINGS AND USING (6) SIX 3-1/4" COMMON SPIRAL NAILS FOR BEARINGS EQUAL TO OR LONGER THAN 5.5", UNLESS INDICATED OTHERWISE.

CODE

THIS BUILDING COMPONENT IS DESIGNED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, THE ONTARIO BUILDING CODE, CCMC AND CANADIAN STANDARDS ASSOCIATION GUIDELINES.

HANDLING AND INSTALLATION

1. DO NOT DRILL ANY HOLE, CUT OR NOTCH A CERTIFIED BUILDING COMPONENT WITHOUT A WRITTEN PRE-AUTHORIZATION.
2. INSTALLATION AND ASSEMBLY OF FLOOR JOISTS AND LVL BEAMS IS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUFACTURER'S LITERATURE.

MHP 23029

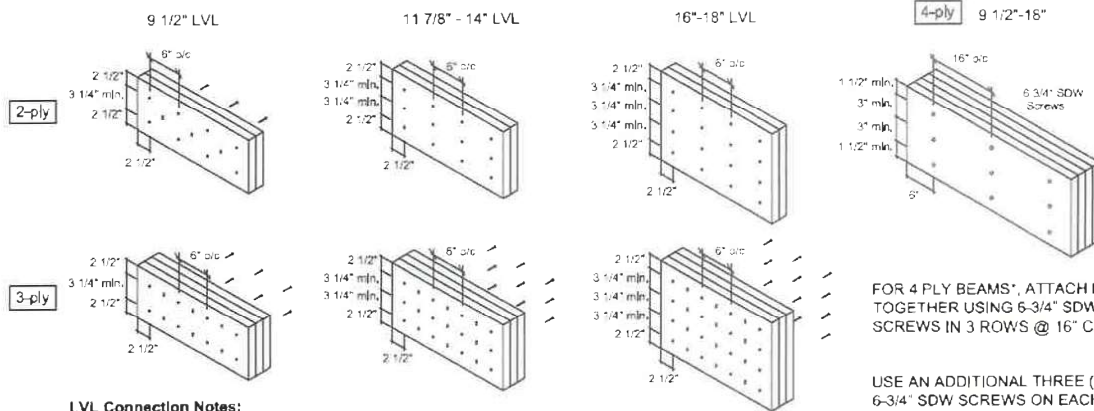
ENG-IM0723-068-KTF-GREENPARK-ZADORRA ESTATES-ROSE 3-1

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MULTIPLE MEMBER CONNECTIONS FOR BEAMS SHOWN ON KOTT LAYOUTS



MULTIPLE MEMBER CONNECTIONS FOR UNIFORMLY DISTRIBUTED TOP & SIDE LOADED LVL BEAMS SHOWN ON KOTT LAYOUTS



LVL Connection Notes:

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

FOR 4 PLY BEAMS*, ATTACH PLYS TOGETHER USING 6-3/4" SDW SCREWS IN 3 ROWS @ 16" C/C.

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

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

FOR MULTIPLE MEMBER CONNECTION OF BOISE ALLJOISTS REFER TO THE BOISE CASCADE INSTALLATION GUIDE

Installation Guide



(Open your phone's camera and hover over this QR code to access it)

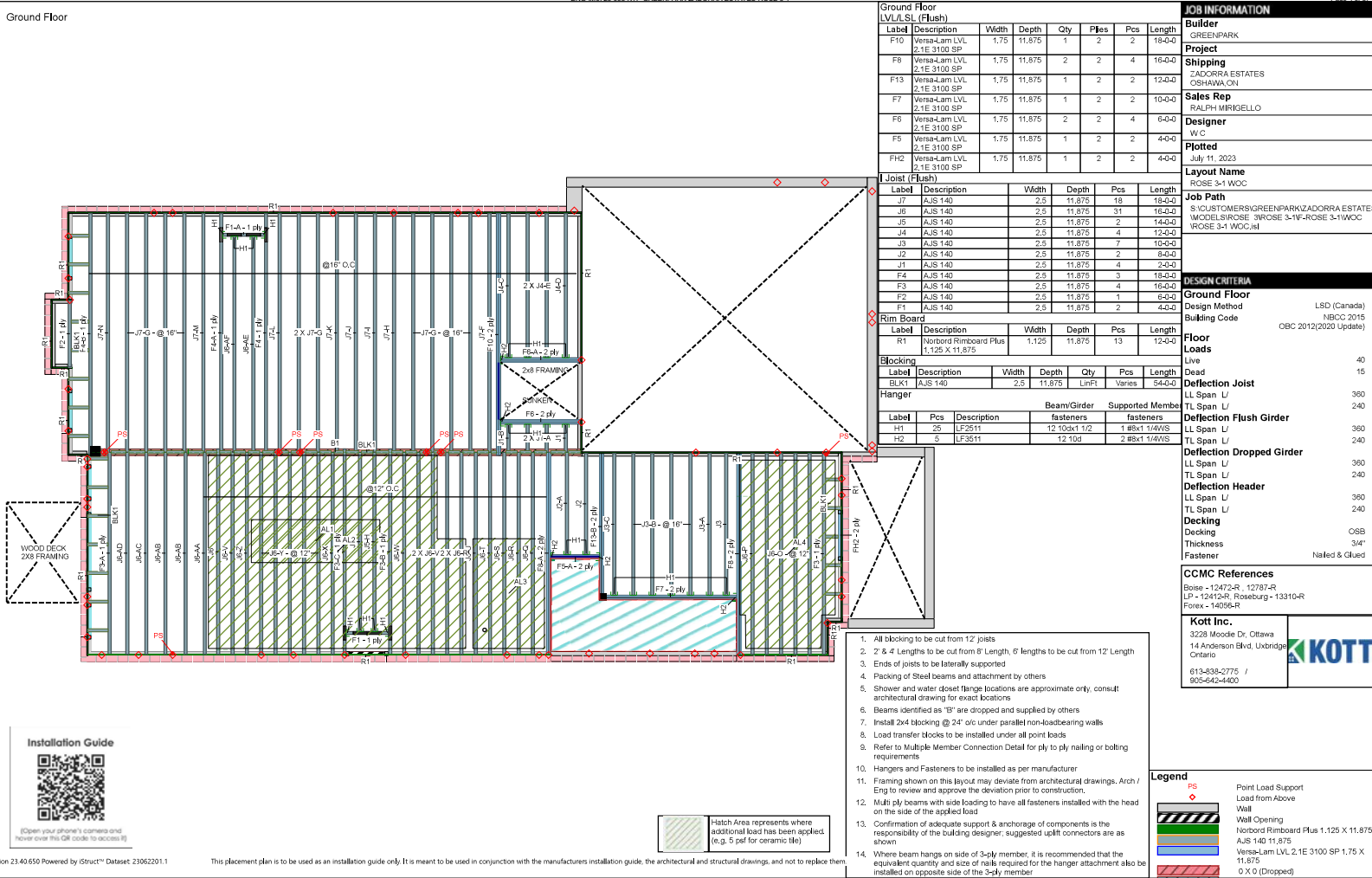
Last Revised January 13, 2023

MHP 23029

Ground Floor

ENG-M0723-068-KT2-GREENPARK-ZADORRA ESTATES-ROSE 3-1

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Installation Guide



(Open your phone's camera and
hover over this QR code to access it)

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

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 for nail 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.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load.
13. Confirmation of adequate support & anchorage of components is the responsibility of the building designer; suggested uplift connectors are as shown.
14. Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member



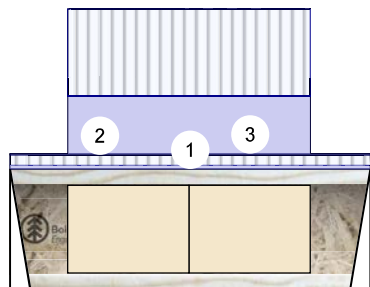
Client: TRIPLE CREEK GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023 ES
C. Morris
PER: _____
5' - PUBLIC RECORDING OFFICIAL

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

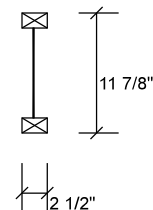
F1	AJS 140	11.875
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Level: Ground Floor

MHP 23029



1 Hanger (LF2511) 0-2-0
2 Hanger (LF2511) 0-2-0
2'11 11/16"
2'11 11/16"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	308	196	0	0
2	Vertical	305	194	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	44%	245 / 463	708	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	44%	242 / 458	700	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	597 ft-lb	1'5 13/16"	5305 ft-lb	0.113 (11%)	1.25D+1.5L	L
Unbraced	597 ft-lb	1'5 13/16"	5305 ft-lb	0.113 (11%)	1.25D+1.5L	L
Shear	701 lb	1 1/4"	2350 lb	0.298 (30%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/10538)	1'5 13/16"	0.092 (L/360)	0.034 (3%)	D	Uniform
LL Defl inch	0.005 (L/6761)	1'5 13/16"	0.092 (L/360)	0.053 (5%)	L	L
TL Defl inch	0.008 (L/4119)	1'5 13/16"	0.138 (L/240)	0.058 (6%)	D+L	L



JULY 13, 2023

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 Left Header: SPF, Thickness: 2 1/2"
- 4 Right Header: SPF, Thickness: 2 1/2"
- 5 Girders are designed to be supported on the bottom edge only.
- 6 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 7 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-11	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-11-11		Top	4 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-5-12 to 2-5-12		Far Face	172 PLF	261 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

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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

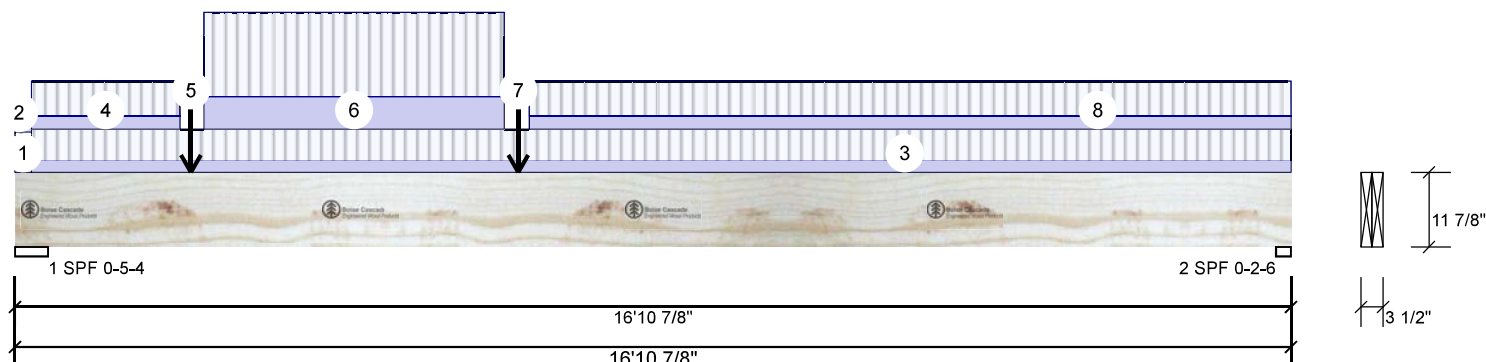
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/17/2026

F10	Versa-Lam LVL 2.1E 3100 SP	1.750" X 11.875"	2-Ply - PASSED	Level: Ground Floor
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Ply - PASSED Level: Ground Floor
MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	687	409	0	0
2	Vertical	451	285	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	14%	512 / 1031	1543	L	1.25D+1.5L
2 - SPF	2.375"	Vert	20%	356 / 677	1033	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6906 ft-lb	6'8"	35392 ft-lb	0.195 (20%)	1.25D+1.5L	L
Unbraced	6906 ft-lb	6'8"	35392 ft-lb	0.195 (20%)	1.25D+1.5L	L
Shear	1464 lb	1'5 1/8"	13217 lb	0.111 (11%)	1.25D+1.5L	L
Perm Defl in.	0.074 (L/2641)	8'2 11/16"	0.546 (L/360)	0.136 (14%)	D	Uniform
LL Defl inch	0.131 (L/1506)	8'1 11/16"	0.546 (L/360)	0.239 (24%)	L	L
TL Defl inch	0.205 (L/959)	8'2 1/16"	0.820 (L/240)	0.250 (25%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 10'2 13/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-10	0-3-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-2-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 16-10-14	0-3-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-2-10 to 2-2-3	0-4-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	2-3-15		Near Face	70 lb	99 lb	0 lb	0 lb	F6

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



This design is valid until 4/17/2026

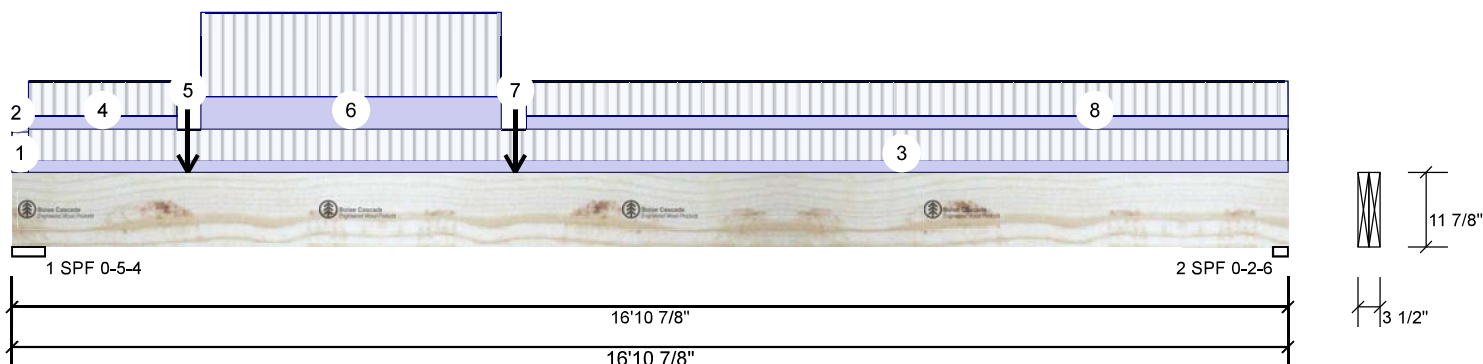


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor
MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Part. Uniform	2-6-1 to 6-5-13		Top	13 PLF	34 PLF	0 PLF	0 PLF	
7	Point	6-8-0		Near Face	228 lb	520 lb	0 lb	0 lb	F6
8	Tie-In	6-9-12 to 16-10-14	0-4-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				



JULY 13, 2023

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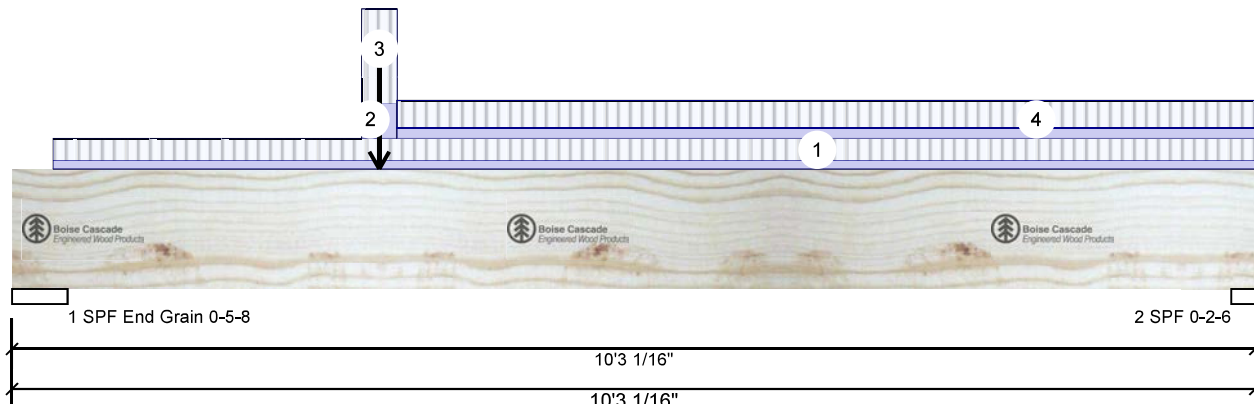


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F13-B	Versa-Lam LVL 2.1E 3'00 SP	PER: CHIEF BUILDING OFFICIAL	1.750" X 11.875"	2-Ply	PASSED	Level: Ground Floor
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Level: Ground Floor



Technical drawing of a rectangular frame with internal diagonal bracing. The drawing includes a side elevation showing a height of $11 \frac{7}{8}$ " and a front elevation showing a width of $3 \frac{1}{2}$ ".

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	354	210	0	0
2	Vertical	267	165	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	Vert	4%	263 / 531	794	L	1.25D+1.5L
2 - SPF	2.375"	Vert	12%	206 / 401	607	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1918 ft-lb	3'8"	35392 ft-lb	0.054 (5%)	1.25D+1.5L	L
Unbraced	1918 ft-lb	3'8"	35392 ft-lb	0.054 (5%)	1.25D+1.5L	L
Shear	749 lb	1'5 3/8"	13217 lb	0.057 (6%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/14317)	5' 3/4"	0.324 (L/360)	0.025 (3%)	D	Uniform
LL Defl inch	0.014 (L/8271)	5' 1/8"	0.324 (L/360)	0.044 (4%)	L	L
TL Defl inch	0.022 (L/5242)	5' 3/8"	0.486 (L/240)	0.046 (5%)	D+L	L



JULY 13, 2023

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- 6 Bottom must be laterally braced at a maximum of 7'2 11/16" o.c.
- 7 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-4-1 to 10-3-1	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	2-10-10 to 3-2-2	1-10-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	3-0-6		Far Face	123 lb	272 lb	0 lb	0 lb	F5
4	Tie-In	3-2-2 to 10-3-1	0-6-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				12 PLF				

Notes

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Lumber

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

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6. For flat roofs provide proper drainage to prevent ponding

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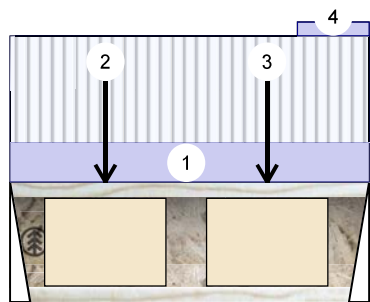
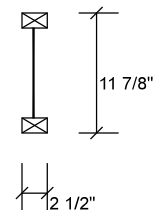
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F1-A AJS 140 11.875" - PASSED

MHP 23029

Level: Ground Floor

1 Hanger (LF2511) 0-2-0
2 Hanger (LF2511) 0-2-0
2'11 9/16"
2'11 9/16"

Member Information

Type:	Girder	Application:	Floor (Residential)
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Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	331	126	0	0
2	Vertical	323	128	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	41%	157 / 497	654	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	40%	160 / 484	644	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	457 ft-lb	1'9 3/16"	5305 ft-lb	0.086 (9%)	1.25D+1.5L	L
Unbraced	457 ft-lb	1'9 3/16"	5305 ft-lb	0.086 (9%)	1.25D+1.5L	L
Shear	647 lb	1 1/4"	2350 lb	0.275 (28%)	1.25D+1.5L	L
Perm Defl in. (L/19337)	0.002	1'7 1/16"	0.092 (L/360)	0.019 (2%)	D	Uniform
LL Defl inch (L/7467)	0.004	1'6 9/16"	0.092 (L/360)	0.048 (5%)	L	L
TL Defl inch (L/5387)	0.006	1'6 3/4"	0.138 (L/240)	0.045 (4%)	D+L	L

Design Notes

- 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.
- Fill all hanger nailing holes.
- Left Header: SPF, Thickness: 2 1/2"
- Right Header: SPF, Thickness: 2 1/2"
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-9	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-7		Far Face	104 lb	278 lb	0 lb	0 lb	J5
3	Point	2-1-7		Far Face	113 lb	285 lb	0 lb	0 lb	J5
4	Part. Uniform	2-4-7 to 2-11-9		Top	4 PLF	0 PLF	0 PLF	0 PLF	

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

Kott Inc.

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



This design is valid until 4/17/2026

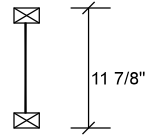
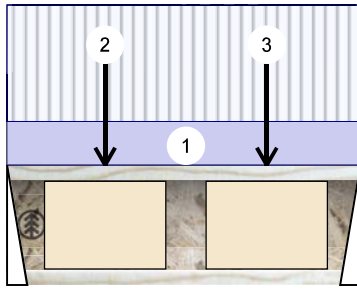


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: *C. Martin*
375" - PASSED

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F1-B AJS 140 11.875" **-PASSED**

MHP 23029



1 Hanger (LF2511) 0-2-0

2 Hanger (LF2511) 0-2-0

2'11"

2'11"

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	377	142	0	0
2	Vertical	383	144	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	46%	177 / 565	742	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	47%	180 / 575	755	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	510 ft-lb	1'3 1/16"	5305 ft-lb	0.096 (10%)	1.25D+1.5L	L
Unbraced	510 ft-lb	1'3 1/16"	5305 ft-lb	0.096 (10%)	1.25D+1.5L	L
Shear	748 lb	2'9 3/4"	2350 lb	0.318 (32%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/17466)	1'4 7/8"	0.090 (L/360)	0.021 (2%)	D	Uniform
LL Defl inch	0.005 (L/6567)	1'4 7/8"	0.090 (L/360)	0.055 (5%)	L	L
TL Defl inch	0.007 (L/4773)	1'4 7/8"	0.135 (L/240)	0.050 (5%)	D+L	L



JULY 13, 2023

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Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Left Header: SPF, Thickness: 2 1/2"
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- 7 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	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-0	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-11		Near Face	127 lb	338 lb	0 lb	0 lb	J6
3	Point	2-1-11		Near Face	125 lb	332 lb	0 lb	0 lb	J6

Notes

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Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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www.bc.com
CCMC: 12787

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



This design is valid until 4/17/2026



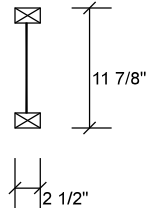
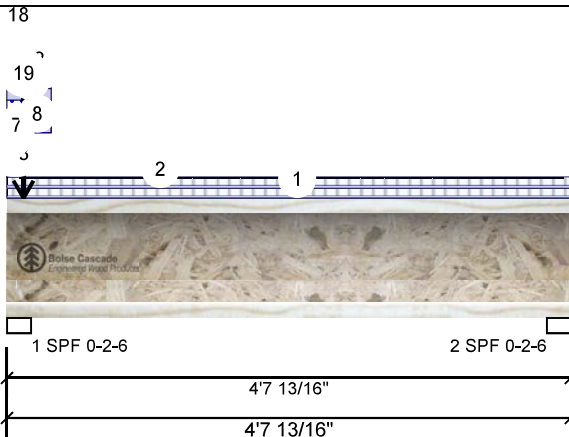
Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: *C. Martin*
5' - PASSED OFFICIAL

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F2	AJS 140	11.875
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Level: Ground Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	188	487	416	0
2	Vertical	126	48	1	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	84%	609 / 812	1421	L	1.25D+1.5S +L
2 - SPF	2.375"	Vert	17%	60 / 189	249	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	259 ft-lb	2'3 3/4"	4668 ft-lb	0.055 (6%)	1.25D+1.5L	L
Unbraced	259 ft-lb	2'3 3/4"	4668 ft-lb	0.055 (6%)	1.25D+1.5L	L
Shear	282 lb	1 5/8"	2068 lb	0.136 (14%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/40201)	2'3 9/16"	0.146 (L/360)	0.009 (1%)	D	Uniform
LL Defl inch	0.003 (L/15674)	2'3 7/8"	0.146 (L/360)	0.023 (2%)	L+0.5S	L
TL Defl inch	0.005 (L/11278)	2'3 3/4"	0.219 (L/240)	0.021 (2%)	D+L+0.5S	L



JULY 13, 2023

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at bearings.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-7-13	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-7-13	0-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-1-2		Top	15 PLF	0 PLF	44 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-1-2		Top	20 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Tapered Start	0-0-0		Top	2 PLF	6 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

1. IJoist 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 IJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

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

Manufacturer Info

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

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



This design is valid until 4/17/2026

Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 8 of 47

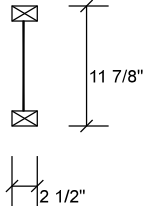
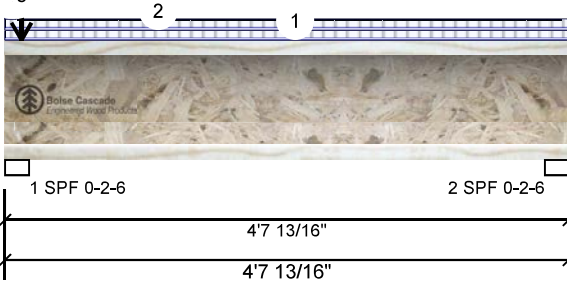
F2 AJS 140 11.875'

PER:
PASSED OFFICIAL

Level: Ground Floor

MHP 23029

18

19
8
7

...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	0-1-2			2 PLF	6 PLF	0 PLF	0 PLF	
6	Part. Uniform	0-0-0 to 0-1-2		Top	1 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
7	Part. Uniform	0-0-0 to 0-1-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	0-0-0 to 0-4-6		Top	30 PLF	0 PLF	87 PLF	0 PLF	
9	Part. Uniform	0-0-0 to 0-4-6		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Tapered Start	0-0-0		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	0-4-6			5 PLF	13 PLF	0 PLF	0 PLF	
11	Part. Uniform	0-0-0 to 0-4-6		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
12	Part. Uniform	0-0-0 to 0-4-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
13	Part. Uniform	0-1-2 to 0-1-2		Top	30 PLF	0 PLF	87 PLF	0 PLF	
14	Part. Uniform	0-1-2 to 0-1-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
15	Tapered Start	0-1-2		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	0-1-2			5 PLF	13 PLF	0 PLF	0 PLF	
16	Part. Uniform	0-1-2 to 0-1-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
17	Tapered Start	0-1-2		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	0-1-2			5 PLF	13 PLF	0 PLF	0 PLF	
18	Part. Uniform	0-1-2 to 0-1-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
19	Point	0-1-10		Top	376 lb	57 lb	381 lb	0 lb	B2
	Bearing Length	0-1-8							

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JULY 13, 2023

Notes

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Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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This design is valid until 4/17/2026



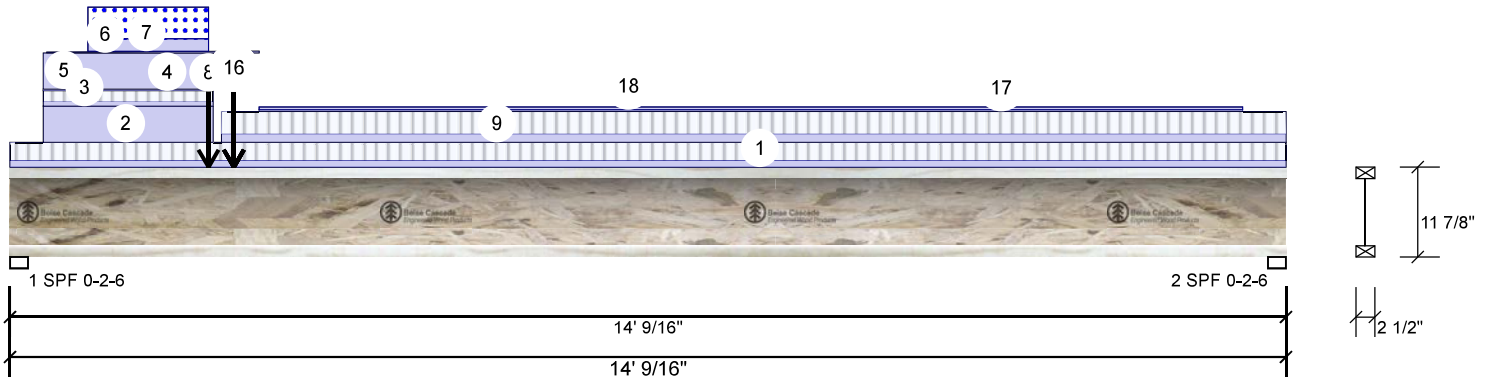
Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: 
5' - PASSED
CIVIL ENGINEERING OFFICIAL

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F3 AJS 140 11.875

Level: Ground Floor

MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	388	497	312	0
2	Vertical	334	203	52	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	90%	621 / 894	1515	L	1.25D+1.5L +S
2 - SPF	2.375"	Vert	48%	254 / 552	806	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3358 ft-lb	5'5 3/4"	5305 ft-lb	0.633 (63%)	1.25D+1.5L +S	L
Unbraced	3358 ft-lb	5'5 3/4"	5305 ft-lb	0.633 (63%)	1.25D+1.5L +S	L
Shear	1510 lb	1 5/8"	2350 lb	0.643 (64%)	1.25D+1.5L +S	L
Perm Defl in.	0.116 (L/1423)	6'5 13/16"	0.459 (L/360)	0.253 (25%)	D	Uniform
LL Defl inch	0.177 (L/935)	6'8 3/4"	0.459 (L/360)	0.385 (38%)	L+0.5S	L
TL Defl inch	0.293 (L/565)	6'7 5/8"	0.689 (L/240)	0.425 (43%)	D+L+0.5S	L



JULY 13, 2023

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at bearings.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-0-9	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-4-6 to 2-2-13		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-4-6		Top	5 PLF	12 PLF	0 PLF	0 PLF	
	End	2-2-13			5 PLF	12 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-6 to 2-2-13		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
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This design is valid until 4/17/2026

Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

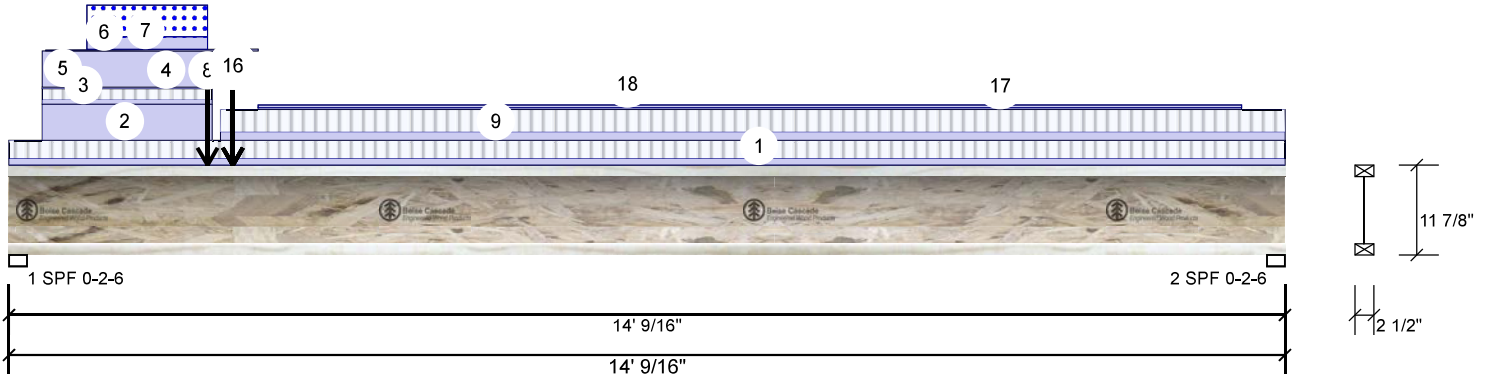
Page 10 of 47

F3 AJS 140 11.875'

PER: *Chen*
PASSED OFFICIAL

Level: Ground Floor

MHP 23029



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	0-4-6 to 2-2-13		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Tapered Start	0-4-14		Top	1 PLF	0 PLF	0 PLF	0 PLF	
	End	2-8-15			2 PLF	0 PLF	0 PLF	0 PLF	
7	Part. Uniform	0-10-5 to 2-2-4		Top	14 PLF	0 PLF	35 PLF	0 PLF	
8	Point	2-2-4		Top	134 lb	0 lb	318 lb	0 lb	F9
	Bearing Length	0-3-8							
9	Tie-In	2-3-15 to 14-0-9	0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
11	Point	2-5-9		Top	1 lb	0 lb	0 lb	0 lb	Rim Board Self Weight
	Bearing Length	0-3-8							
12	Point	2-5-9		Top	18 lb	47 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
13	Point	2-5-9		Top	17 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-3-8							
14	Point	2-5-9		Top	17 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-3-8							
15	Point	2-5-9		Top	30 lb	81 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
16	Point	2-5-9		Top	29 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-3-8							
17	Part. Uniform	2-8-15 to 13-6-13		Top	2 PLF	0 PLF	0 PLF	0 PLF	
18	Part. Uniform	2-8-15 to 13-6-13		Top	3 PLF	0 PLF	0 PLF	0 PLF	

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JULY 13, 2023

Notes

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Lumber

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2. Joist not to be treated with fire retardant or corrosive

chemicals**Handling & Installation**

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

Manufacturer Info

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

This design is valid until 4/17/2026

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



Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 11 of 47

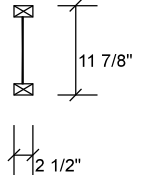
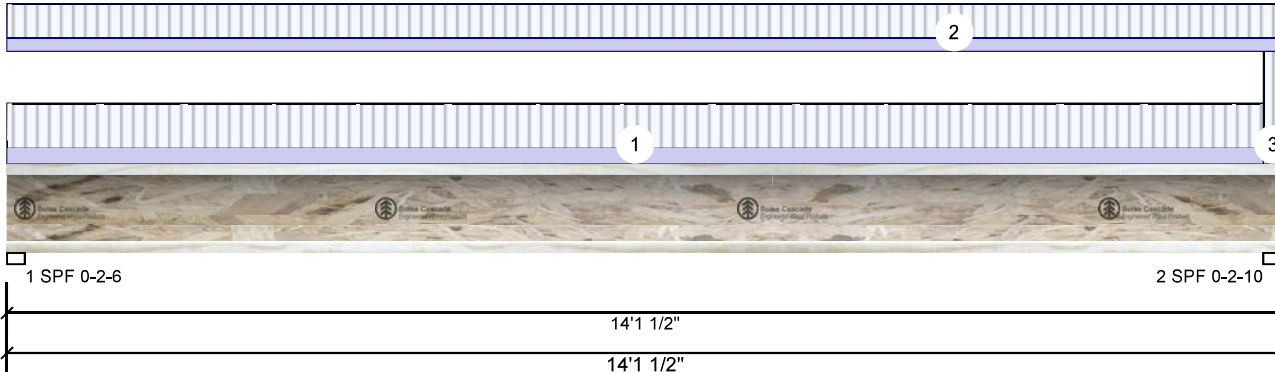
F3-A AJS 140

11.875"

- PASSED

MHP 23029

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	393	147	0	0
2	Vertical	400	150	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	46%	184 / 589	773	L	1.25D+1.5L
2 - SPF	2.625"	Vert	45%	187 / 600	787	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2623 ft-lb	7' 5/8"	5305 ft-lb	0.495 (49%)	1.25D+1.5L	L
Unbraced	2623 ft-lb	7' 5/8"	5305 ft-lb	0.495 (49%)	1.25D+1.5L	L
Shear	762 lb	13'11 5/8"	2350 lb	0.324 (32%)	1.25D+1.5L	L
Perm Defl in.	0.063 (L/2651)	7' 5/8"	0.461 (L/360)	0.136 (14%)	D	Uniform
LL Defl inch	0.167 (L/994)	7' 5/8"	0.461 (L/360)	0.362 (36%)	L	
TL Defl inch	0.230 (L/723)	7' 5/8"	0.692 (L/240)	0.332 (33%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at bearings.



JULY 13, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-10-14	0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-1-8	0-7-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	13-10-14 to 14-1-8	1-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

This design is valid until 4/17/2026

Manufacturer Info

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

Kott Inc.

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



Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

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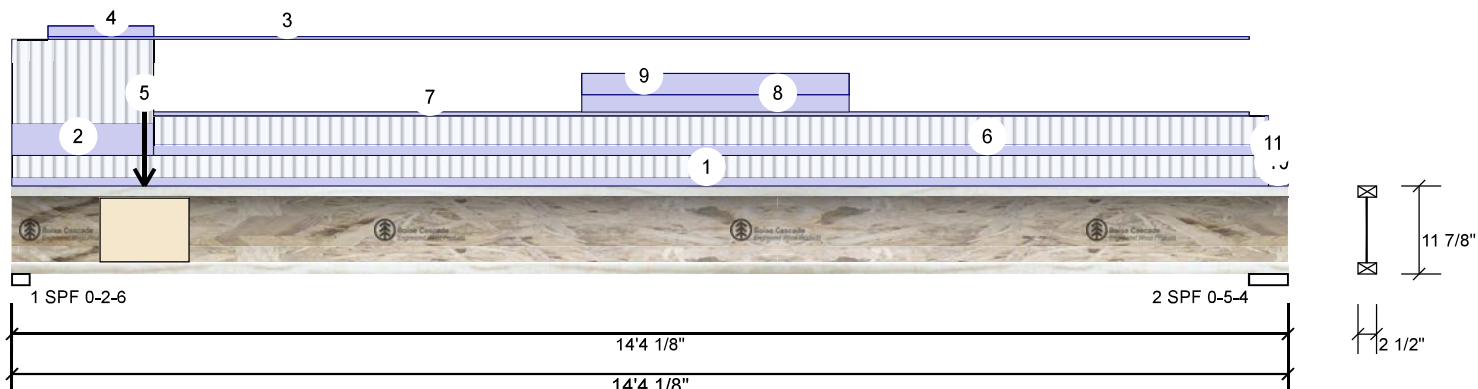
F3-C AJS 140

11.875"

PASSED

MHP 23029

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Part. Uniform	6-4-14 to 9-4-15		Top	13 PLF	0 PLF	0 PLF	0 PLF	
9	Part. Uniform	6-4-14 to 9-4-15		Top	16 PLF	0 PLF	0 PLF	0 PLF	
10	Tie-In	14-1-8 to 14-4-2	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
11	Tie-In	14-1-8 to 14-4-2	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	



JULY 13, 2023

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2. Joist not to be treated with fire retardant or corrosive

chemicals

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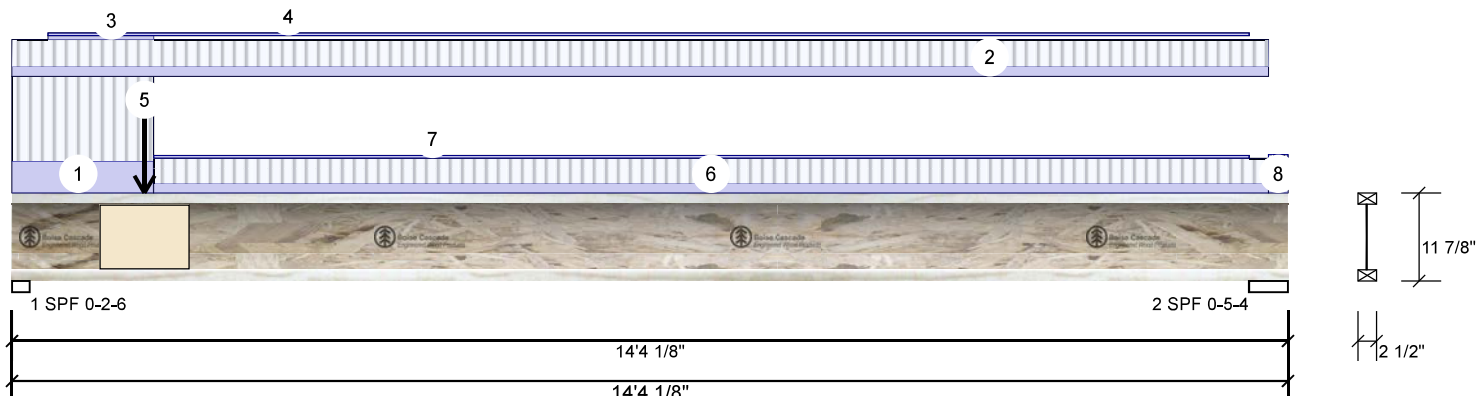




Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: *C. Moore*
375" - PASSED
CITY BUILDING OFFICIAL

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F3-D AJS 140 11.875" **PASSED** MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	633	271	0	0
2	Vertical	315	146	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	77%	339 / 950	1289	L	1.25D+1.5L
2 - SPF	5.250"	Vert	34%	183 / 472	655	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2466 ft-lb	6'2 3/8"	5305 ft-lb	0.465 (46%)	1.25D+1.5L	L
Unbraced	2466 ft-lb	6'2 3/8"	5305 ft-lb	0.465 (46%)	1.25D+1.5L	L
Shear	1267 lb	1 5/8"	2350 lb	0.539 (54%)	1.25D+1.5L	L
Perm Defl in.	0.070 (L/2377)	6'9 3/4"	0.461 (L/360)	0.151 (15%)	D	Uniform
LL Defl inch	0.152 (L/1090)	6'9 1/4"	0.461 (L/360)	0.330 (33%)	L	L
TL Defl inch	0.222 (L/747)	6'9 7/16"	0.692 (L/240)	0.321 (32%)	D+L	L



JULY 13, 2023

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 12'10 1/4" o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-7-2	1-7-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-1-8	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-14 to 1-7-2		Top	3 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-14 to 13-10-14		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-5-14		Far Face	128 lb	323 lb	0 lb	0 lb	F1
6	Tie-In	1-7-2 to 14-1-8	0-5-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-7-2 to 13-10-14		Top	2 PLF	0 PLF	0 PLF	0 PLF	
8	Tie-In	14-1-8 to 14-4-2	0-6-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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

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



This design is valid until 4/17/2026



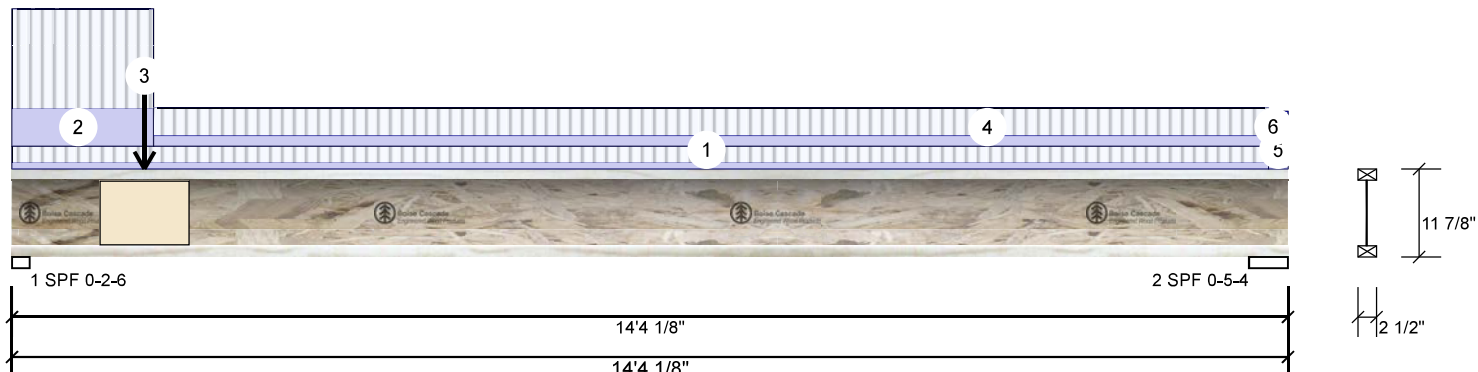
Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F3-E AJS 140 11.875" - PASSED

MHP 23029

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	568	215	0	0
2	Vertical	242	91	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	66%	268 / 852	1120	L	1.25D+1.5L
2 - SPF	5.250"	Vert	25%	114 / 363	477	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1870 ft-lb	5'9 3/8"	5305 ft-lb	0.352 (35%)	1.25D+1.5L	L
Unbraced	1870 ft-lb	5'9 3/8"	5305 ft-lb	0.352 (35%)	1.25D+1.5L	L
Shear	1100 lb	1 5/8"	2350 lb	0.468 (47%)	1.25D+1.5L	L
Perm Defl in.	0.046 (L/3628)	6'8 3/16"	0.461 (L/360)	0.099 (10%)	D	Uniform
LL Defl inch	0.122 (L/1366)	6'8 1/4"	0.461 (L/360)	0.264 (26%)	L	L
TL Defl inch	0.167 (L/992)	6'8 3/16"	0.692 (L/240)	0.242 (24%)	D+L	L



JULY 13, 2023

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 12'10 1/4" o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-1-8	0-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-2	1-7-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-5-14		Near Face	126 lb	331 lb	0 lb	0 lb	F1
4	Tie-In	1-7-2 to 14-1-8	0-5-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	14-1-8 to 14-4-2	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	14-1-8 to 14-4-2	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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This design is valid until 4/17/2026



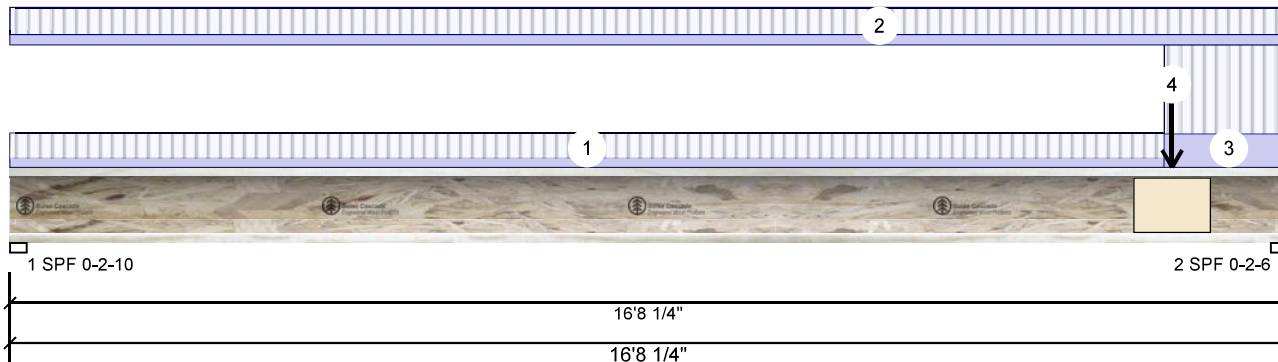
Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: *C. M...*
5' - PASSED
MAILS ISSUING OFFICIAL

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F4	AJS 140	11.875
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Level: Ground Floor

MHP 23029



11 7/8"

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	341	128	0	0
2	Vertical	726	272	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	39%	160 / 511	671	L	1.25D+1.5L
2 - SPF	2.375"	Vert	85%	341 / 1088	1429	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3015 ft-lb	9'3 9/16"	5305 ft-lb	0.568 (57%)	1.25D+1.5L	L
Unbraced	3015 ft-lb	9'3 9/16"	5305 ft-lb	0.568 (57%)	1.25D+1.5L	L
Shear	1407 lb	16'6 5/8"	2350 lb	0.599 (60%)	1.25D+1.5L	L
Perm Defl in.	0.100 (L/1968)	8'7 3/4"	0.546 (L/360)	0.183 (18%)	D	Uniform
LL Defl inch	0.266 (L/738)	8'7 3/4"	0.546 (L/360)	0.488 (49%)	L	L
TL Defl inch	0.366 (L/537)	8'7 3/4"	0.820 (L/240)	0.447 (45%)	D+L	L



Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 15'2 3/8" o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-1-2	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-8-4	0-5-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	15-1-2 to 16-8-4	1-6-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	15-2-6		Far Face	144 lb	383 lb	0 lb	0 lb	F1

Notes

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Lumber

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

chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
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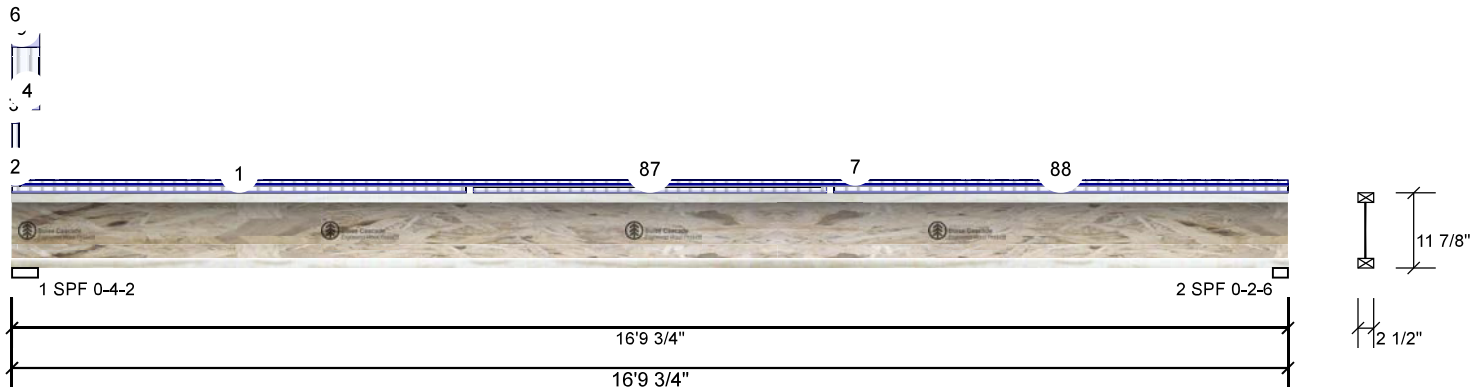
This design is valid until 4/17/2026



Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F4-B AJS 140 11.875" **PASSED** MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	577	263	0	0
2	Vertical	455	171	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.125"	Vert	62%	329 / 866	1195	L	1.25D+1.5L
2 - SPF	2.375"	Vert	53%	213 / 683	896	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3574 ft-lb	8'5 3/4"	5305 ft-lb	0.674 (67%)	1.25D+1.5L	L
Unbraced	3574 ft-lb	8'5 3/4"	5305 ft-lb	0.674 (67%)	1.25D+1.5L	L
Shear	933 lb	3 3/8"	2350 lb	0.397 (40%)	1.25D+1.5L	L
Perm Defl in.	0.116 (L/1695)	8'5 3/4"	0.546 (L/360)	0.212 (21%)	D	Uniform
LL Defl inch	0.309 (L/636)	8'5 3/4"	0.546 (L/360)	0.566 (57%)	L	L
TL Defl inch	0.425 (L/463)	8'5 3/4"	0.820 (L/240)	0.519 (52%)	D+L	L



JULY 13, 2023

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at bearings.

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AS IT CONTAINS SPECIFICATIONS AND CRITERIA
USED IN THE DESIGN OF THIS COMPONENT.**

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-11-13	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-1-2		Top	118 PLF	257 PLF	0 PLF	0 PLF	J7
3	Part. Uniform	0-0-0 to 0-1-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-0-0 to 0-4-6		Top	118 PLF	257 PLF	0 PLF	0 PLF	J7
5	Part. Uniform	0-0-0 to 0-4-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Part. Uniform	0-0-9 to 0-0-9		Top	4 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
7	Tie-In	0-1-8 to 16-9-12	0-7-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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

Kott Inc.

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



This design is valid until 4/17/2026



Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 20 of 47

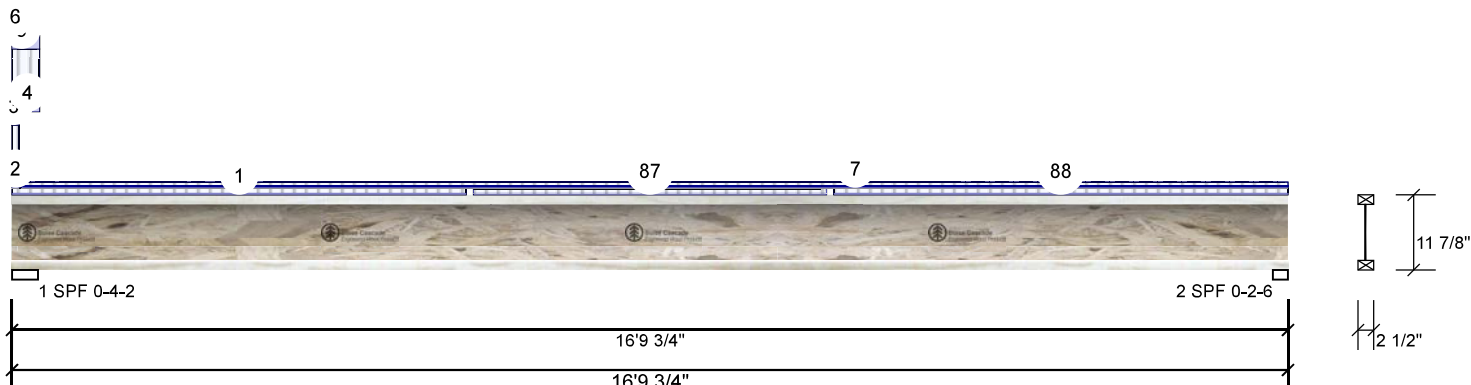
F4-B AJS 140

11.875"

PASSED

MHP 23029

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
87	Tie-In	6-0-15 to 10-8-12	0-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
88	Tie-In	10-9-14 to 16-9-12	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	



JULY 13, 2023

READ ALL NOTES ON THIS PAGE AND ON THE
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Notes

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Lumber

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

chemicals

Handling & Installation

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

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

This design is valid until 4/17/2026

Manufacturer Info

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

Kott Inc.

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



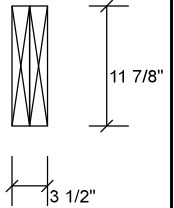
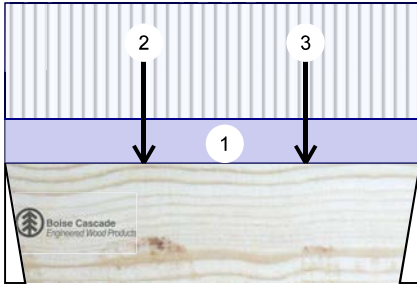


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ES
PER CHIEF ENGINEER OF OSHAWA

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 21 of 47

F5-A Versa-Lam LVL 2.1E 3100 SP 17'50" X 11.875" 2-Ply - PASSED MHP 23029
Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	256	117	0	0
2	Vertical	272	123	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	7%	146 / 384	530	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	7%	153 / 408	562	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	483 ft-lb	1'5 1/4"	35392 ft-lb	0.014 (1%)	1.25D+1.5L	L
Unbraced	483 ft-lb	1'5 1/4"	35392 ft-lb	0.014 (1%)	1.25D+1.5L	L
Shear	445 lb	2'3 3/16"	13217 lb	0.034 (3%)	1.25D+1.5L	L
Perm Defl in. (L/174735)	0.000	1'8 3/8"	0.107 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch (L/76866)	0.001	1'8 3/8"	0.107 (L/360)	0.005 (0%)	L	L
TL Defl inch (L/53383)	0.001	1'8 3/8"	0.161 (L/240)	0.004 (0%)	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 Left Header: DF, Thickness: 3 1/2"
- 4 Right Header: DF, Thickness: 3 1/2"
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Multiple plies must be fastened together as per manufacturer's details.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be continuously laterally braced.
- 9 Bottom must have sheathing attached or be continuously braced.
- 10 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

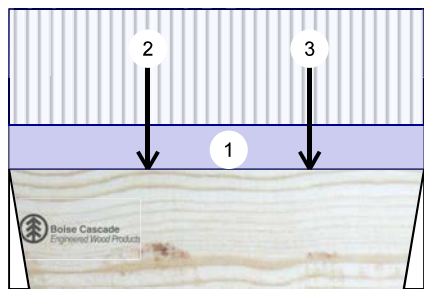
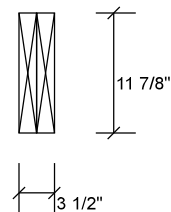
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/17/2026

Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
ESDate: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

Page 22 of 47

F5-A Versa-Lam LVL 2.1E 3100 SP 17'50" X 11.875" 2-Ply - PASSED MHP 23029
Level: Ground Floor1 Hanger (LF3511) 0-2-0
2 Hanger (LF3511) 0-2-0
3'5 1/16"
3'5 1/16"

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-5-1		Top	19 PLF	50 PLF	0 PLF	0 PLF	
2	Point	1-1-12		Far Face	70 lb	186 lb	0 lb	0 lb	J2
3	Point	2-5-12		Far Face	64 lb	171 lb	0 lb	0 lb	J2
	Self Weight				12 PLF				



JULY 13, 2023

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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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



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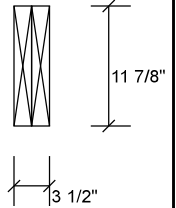
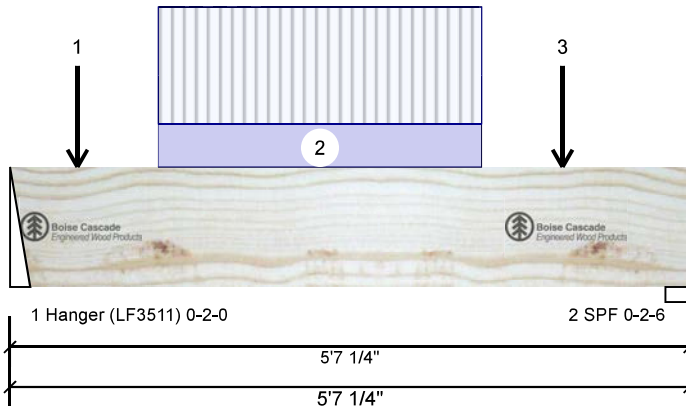


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: C. Martin
00 SP 1750' X 11.875'

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F6 Versa-Lam LVL 2.1E 3100 SP **1-750" X 11.875"** **2-Ply - PASSED** Level: Ground Floor

Level: Ground Floor
MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	99	70	0	0
2	Vertical	88	66	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	3%	87 / 148	235	L	1.25D+1.5L
2 - SPF	2.393"	Vert	4%	82 / 132	214	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	310 ft-lb	2'9 7/16"	35392 ft-lb	0.009 (1%)	1.25D+1.5L	L
Unbraced	310 ft-lb	2'9 7/16"	35392 ft-lb	0.009 (1%)	1.25D+1.5L	L
Shear	233 lb	1'1 7/8"	13217 lb	0.018 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/133245)	2'9 7/16"	0.179 (L/360)	0.003 (0%)	D	Uniform
LL Defl inch	0.001 (L/92667)	2'9 1/2"	0.179 (L/360)	0.004 (0%)	L	L
TL Defl inch	0.001 (L/54656)	2'9 7/16"	0.268 (L/240)	0.004 (0%)	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 Left Header: DF, Thickness: 3 1/2"
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top must be continuously laterally braced.
- 7 Bottom must have sheathing attached or be continuously braced.
- 8 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-6-11		Near Face	15 lb	39 lb	0 lb	0 lb	J1
2	Part. Uniform	1-2-11 to 3-10-11		Near Face	14 PLF	38 PLF	0 PLF	0 PLF	
3	Point	4-6-11		Near Face	17 lb	46 lb	0 lb	0 lb	J1
	Self Weight				12 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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



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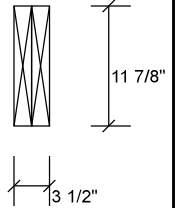
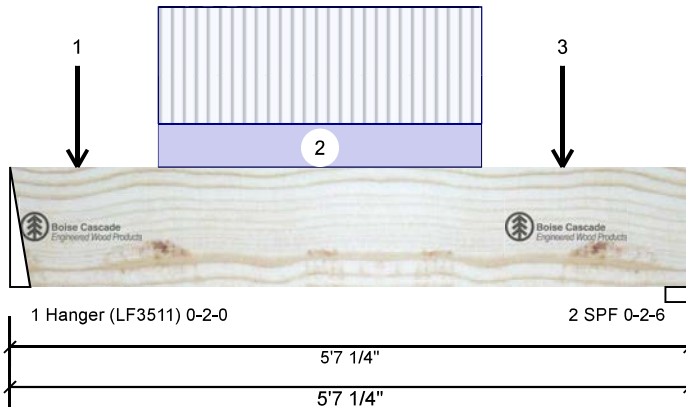


Client: GREENPARK
Project: OF PERMIT PLANS
Address: Nov 22 2023
PER: C. M...
100 SP CHIEF BUILDING OFFICIAL 11.875

Date: 7/11/2023
Input by: W C
Job Name: ROSE 3-1 STD
Project #:

F6-A **Versa-Lam LVL 2.1E 3100 SP** **1.750" X 11.875"** **2-Ply - PASSED** Level: Ground Floor

ly - PASSED Level: Ground Floor
MHP 23029



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
Deflection LL:	360	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	520	228	0	0
2	Vertical	465	208	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	14%	285 / 780	1065	L	1.25D+1.5L
2 - SPF	2.393"	Vert	19%	260 / 697	957	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1415 ft-lb	2'9 1/2"	35392 ft-lb	0.040 (4%)	1.25D+1.5L	L
Unbraced	1415 ft-lb	2'9 1/2"	35392 ft-lb	0.040 (4%)	1.25D+1.5L	L
Shear	1062 lb	1'1 7/8"	13217 lb	0.080 (8%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/40218)	2'9 1/2"	0.179 (L/360)	0.009 (1%)	D	Uniform
LL Defl inch	0.004 (L/17519)	2'9 1/2"	0.179 (L/360)	0.021 (2%)	L	L
TL Defl inch	0.005 (L/12203)	2'9 1/2"	0.268 (L/240)	0.020 (2%)	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 Left Header: DF, Thickness: 3 1/2"
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Multiple plies must be fastened together as per manufacturer's details.
- 6 Top must be continuously laterally braced.
- 7 Bottom must have sheathing attached or be continuously braced.
- 8 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-6-11		Far Face	77 lb	205 lb	0 lb	0 lb	J4
2	Part. Uniform	1-2-11 to 3-10-11		Far Face	75 PLF	201 PLF	0 PLF	0 PLF	
3	Point	4-6-11		Far Face	92 lb	244 lb	0 lb	0 lb	J4
	Self Weight				12 PLF				

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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