

Engineering Note Page (ENP-2)

REVISION 2018-10-17

Please read all notes prior to installation of the component**DESIGN INFORMATION**

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

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

The responsibility of the undersigned is limited to the verification of the structural capacity of the floor joists and LVL beams based on placement as shown on the layout. The loads applied are limited to the gravity effects of the specified loads. The structural integrity of the building and the effect of wind, uplift, seismic, lateral or other forces, calculation of adequate support and anchorage of components, as well as the dimensions and design loads used to calculate components are the responsibility of the overall building designer.

Floor joists and OSB rim board are designed to carry uniformly distributed loads only. Point loads should be transferred through the floor cavity with transfer blocks. Structural elements such as walls, posts, connectors, and transfer blocks are the responsibility of the overall building designer.

The undersigned engineer disclaims any responsibility for damages as a result of being furnished faulty or incorrect information, specifications and/or designs.

Installation of floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at <http://www.kottgroup.com>.

CODE

This building component is designed in accordance with the National Building Code of Canada, the Ontario Building Code, CCMC and Canadian Standards Association guidelines.

COMPONENT

1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies must be connected as per the document "M Connection Details".
4. Pass-thru transfer block framing is required at all point loads over bearings.



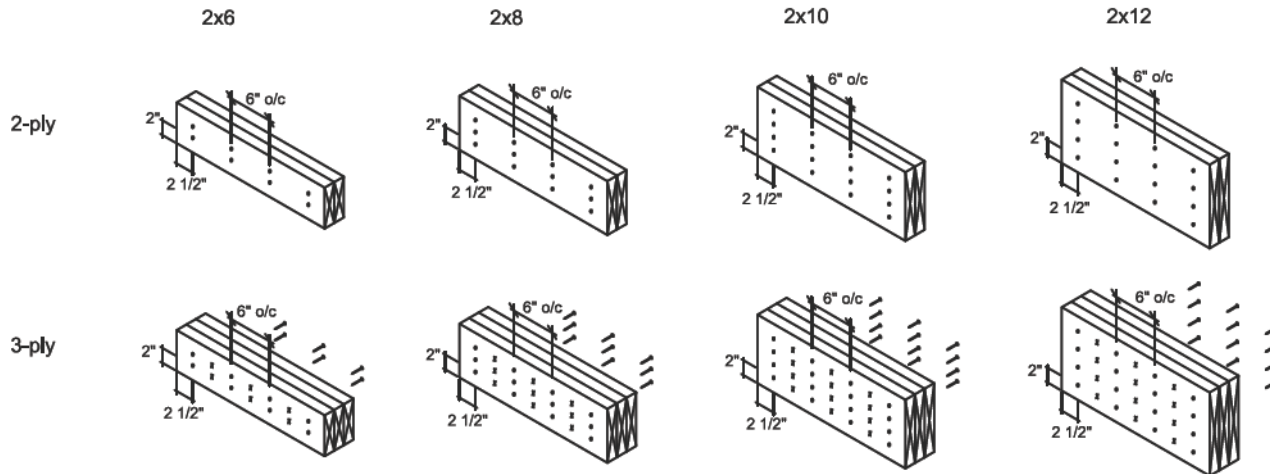
These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

HANDLING AND INSTALLATION

Do not drill any hole, cut or notch a certified building component without a written authorization.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

Conventional Connections



Conventional connection notes:

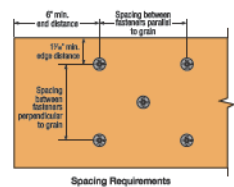
- Nails to be 3" long wire nails.
- Nails to be located 2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

SIMPSON SDW SPACING REQUIREMENT

Table 9 — Spacing Requirements

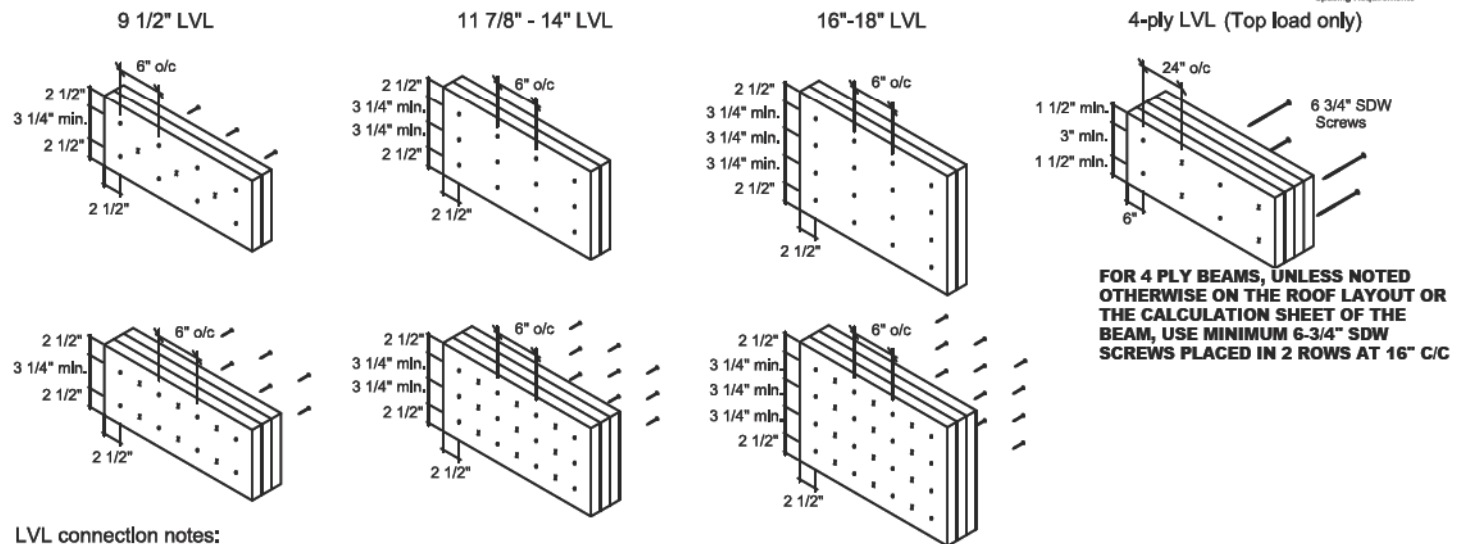
Geometry	Minimum Dimensions (in.)	
	D-J-F-L	S-P-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	3	2 1/2
Edge distance perpendicular to grain	1 1/2	1 1/2

1. Additional screws may be staggered diagonally between rows.



LVL Connections

**HEAD OF ALL SPECIFIED NAILS AND
SCREWS MUST BE ON THE LOADED SIDE**



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.
- Minimum 3 1/4" spacing between rows.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite side.



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Multiple Member Connections

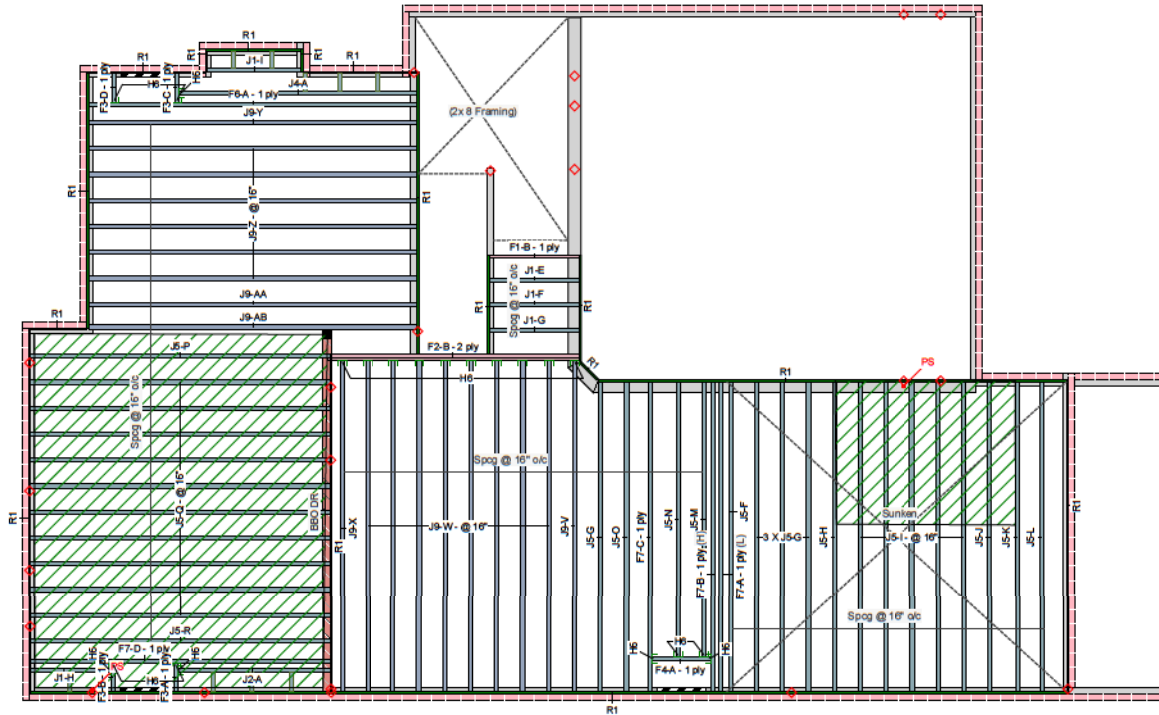
All connections are for uniformly distributed loads.

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



KOTT
3228
Ottawa, ON
K2H 7V1
613-838-2775

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Sewage System			
Zoning			



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

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Zoning			

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

F3-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 22:30:22

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

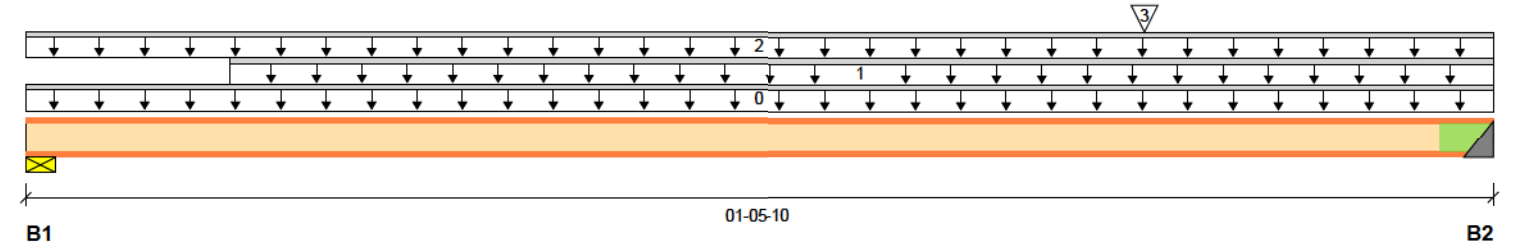
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	73 / 0	37 / 0		
B2, 2"	145 / 0	74 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-07	01-05-10	Top		8			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	64	24			n/a
3	J2	Conc. Pt. (lbs)	L	01-01-07	01-01-07	Front	124	62			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	68 ft-lbs	5305 ft-lbs	1.3%	1	01-01-07
End Reaction	311 lbs	2207 lbs	14.1%	1	01-05-10
End Shear	288 lbs	2350 lbs	12.3%	1	01-03-10
Total Load Deflection	L/999 (0.001")	n/a	n/a	4	01-00-13
Live Load Deflection	L/999 (0")	n/a	n/a	5	01-00-13
Max Defl.	0.001"	n/a	n/a	4	01-00-13
Span / Depth	1.2				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	155 lbs	4.2%	9.2%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	311 lbs	14.1%	14.1%	LF2511

Cautions

Web stiffeners required at bearing B2.

Hanger LF2511 requires (12) 10dx1.5 face nails, (2) 10dx1.5 joist nails.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist



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Zoning			

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

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

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

F3-A

Dry | 1 span | No cant.

December 17, 2020 22:30:22

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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Sewage System			
Zoning			

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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F3-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 22:30:22

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

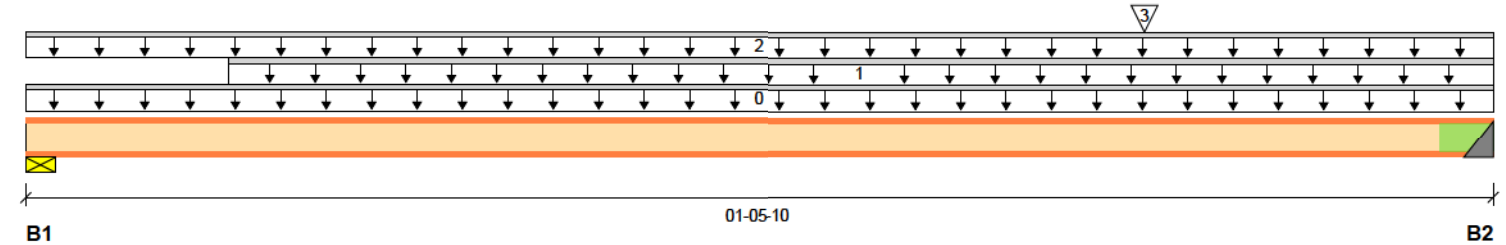
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 01-05-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	61 / 0	31 / 0		
B2, 2"	99 / 0	51 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-07	01-05-10	Top		8			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	64	24			n/a
3	J1	Conc. Pt. (lbs)	L	01-01-07	01-01-07	Back	66	33			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	46 ft-lbs	5305 ft-lbs	0.9%	1	00-11-08
End Reaction	213 lbs	2207 lbs	9.6%	1	01-05-10
End Shear	189 lbs	2350 lbs	8.1%	1	01-03-10
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-11-05
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-11-05
Max Defl.	0"	n/a	n/a	4	00-11-05
Span / Depth	1.2				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	131 lbs	3.6%	7.8%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	213 lbs	9.6%	9.6%	LF2511

Cautions

Web stiffeners required at bearing B2.

Hanger LF2511 requires (12) 10dx1.5 face nails, (2) 10dx1.5 joist nails.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist



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Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

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F3-C

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 22:30:22

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

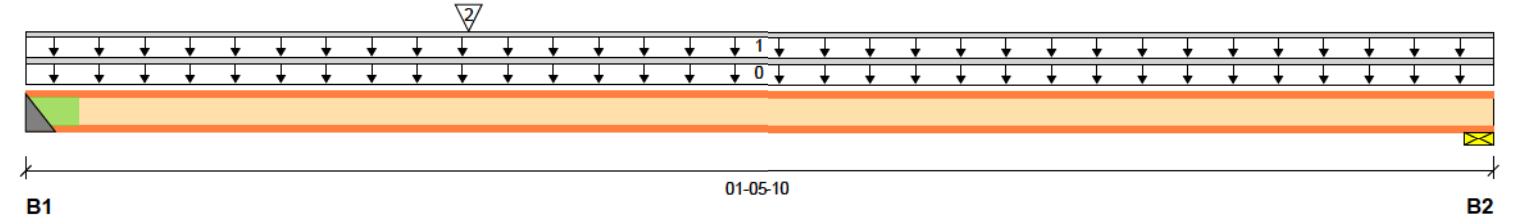
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	191 / 0	73 / 0		
B2, 2-3/8"	103 / 0	41 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	64	24			n/a
2	J4	Conc. Pt. (lbs)	L	00-05-05	00-05-05	Front	200	75			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	116 ft-lbs	5305 ft-lbs	2.2%	1	00-05-05
End Reaction	379 lbs	2207 lbs	17.1%	1	00-00-00
End Shear	357 lbs	2350 lbs	15.2%	1	00-02-00
Total Load Deflection	L/999 (0.001")	n/a	n/a	4	00-05-05
Live Load Deflection	L/999 (0.001")	n/a	n/a	5	00-05-05
Max Defl.	0.001"	n/a	n/a	4	00-05-05
Span / Depth	1.2				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	379 lbs	17.1%	17.1%	LF2511
B2	Wall/Plate 2-3/8" x 2-1/2"	205 lbs	5.6%	12.2%	Spruce-Pine-Fir

Cautions

Web stiffeners required at bearing B1.

Hanger LF2511 requires (12) 10dx1.5 face nails, (2) 10dx1.5 joist nails.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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

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Sewage System			
Zoning			

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F3-D

Dry | 1 span | No cant.

December 17, 2020 22:30:22

BC CALC® Member Report

Build 7364

Job name:

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EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

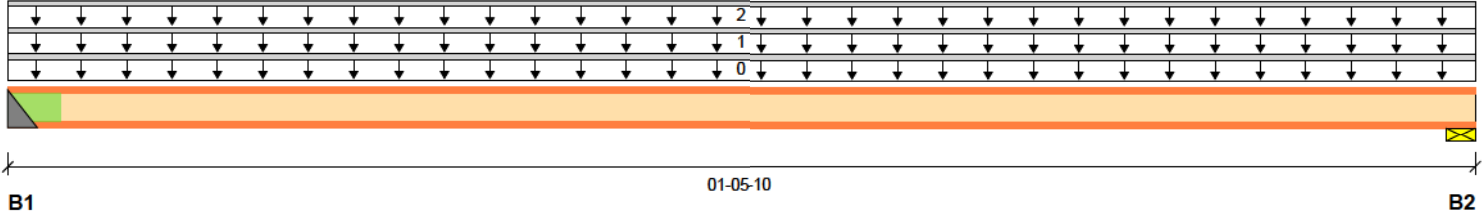
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	66 / 0	26 / 0		
B2, 2-3/8"	68 / 0	28 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	27	10			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-05-10	Top	64	24			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	34 ft-lbs	5305 ft-lbs	0.6%	1	00-08-10
End Reaction	137 lbs	1684 lbs	8.1%	1	01-05-10
End Shear	101 lbs	2350 lbs	4.3%	1	00-02-00
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-08-10
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-08-10
Max Defl.	0"	n/a	n/a	4	00-08-10
Span / Depth	1.2				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	131 lbs	5.9%	5.9%	LF2511
B2	Wall/Plate 2-3/8" x 2-1/2"	137 lbs	3.7%	8.1%	Spruce-Pine-Fir

Cautions

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

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Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Zoning			

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F4-A

Dry | 1 span | No cant.

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EAST GWILLIMBURY, ON.

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City, Province, Postal Code:

Specifier:

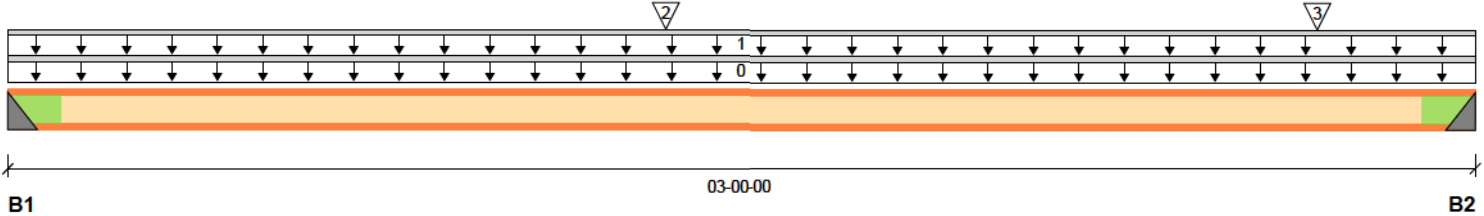
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	284 / 0	110 / 0		
B2, 2"	446 / 0	171 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	34	13			n/a
2	J5	Conc. Pt. (lbs)	L	01-04-02	01-04-02	Back	384	144			n/a
3	J5	Conc. Pt. (lbs)	L	02-08-02	02-08-02	Back	243	91			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	636 ft-lbs	5305 ft-lbs	12.0%	1	01-04-02
End Reaction	883 lbs	2207 lbs	40.0%	1	03-00-00
End Shear	871 lbs	2350 lbs	37.1%	1	02-10-00
Total Load Deflection	L/999 (0.008")	n/a	n/a	4	01-04-02
Live Load Deflection	L/999 (0.006")	n/a	n/a	5	01-04-02
Max Defl.	0.008"	n/a	n/a	4	01-04-02
Span / Depth	2.8				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	564 lbs	25.5%	25.6%	LF2511
B2	Hanger 2" x 2-1/2"	883 lbs	39.9%	40.0%	LF2511

Cautions

Web stiffeners required at bearing B1.

Hanger LF2511 requires (12) 10dx1.5 face nails, (2) 10dx1.5 joist nails.

Web stiffeners required at bearing B2.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

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

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

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F4-A

Dry | 1 span | No cant.

December 17, 2020 22:30:22

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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F6-A

Dry | 1 span | No cant.

December 17, 2020 22:30:22

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

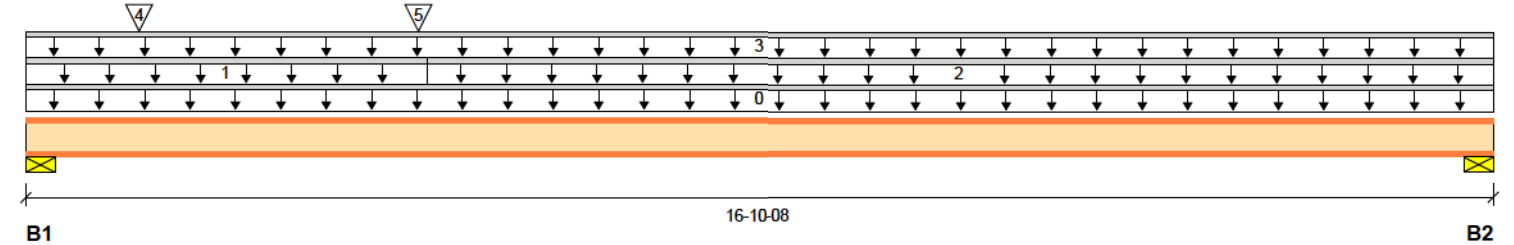
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 16-10-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	538 / 0	225 / 0		
B2, 4-3/8"	324 / 0	143 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	16-10-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	04-07-06	Top	32	12			n/a
2		Unf. Lin. (lb/ft)	L	04-07-06	16-10-08	Top	11	4			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	16-10-08	Top	19	7			n/a
4	F3	Conc. Pt. (lbs)	L	01-03-10	01-03-10	Back	66	26			n/a
5	F3	Conc. Pt. (lbs)	L	04-06-02	04-06-02	Back	191	73			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3364 ft-lbs	5305 ft-lbs	63.4%	1	06-01-13
End Reaction	1088 lbs	1684 lbs	64.6%	1	00-00-00
End Shear	1067 lbs	2350 lbs	45.4%	1	00-02-06
Total Load Deflection	L/495 (0.399")	n/a	48.5%	4	07-10-04
Live Load Deflection	L/707 (0.279")	n/a	50.9%	5	07-10-04
Max Defl.	0.399"	n/a	39.9%	4	07-10-04
Span / Depth	16.6				



Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1088 lbs	29.8%	64.6%	Spruce-Pine-Fir
B2	Wall/Plate 4-3/8" x 2-1/2"	666 lbs	9.9%	34.8%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum Total load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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F7-A

Dry | 1 span | No cant.

December 17, 2020 22:30:22

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

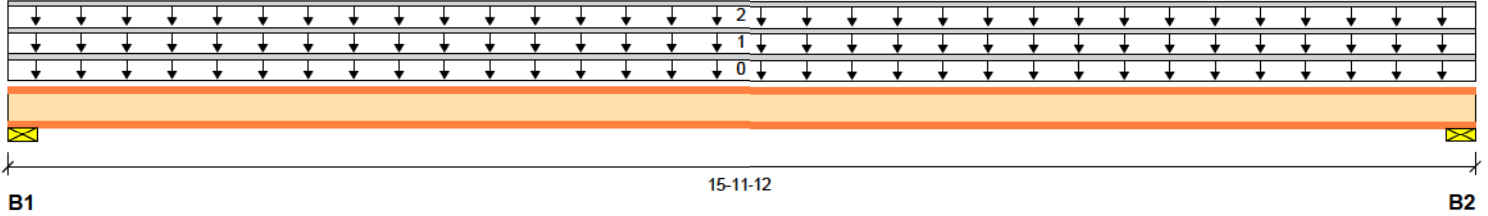
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 15'-11-12"

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	145 / 0	74 / 0		
B2, 6-7/8"	152 / 0	78 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top	8	3			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top	10	4			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1171 ft-lbs	5305 ft-lbs	22.1%	1	07-09-10
End Reaction	311 lbs	1684 lbs	18.5%	1	00-00-00
End Shear	303 lbs	2350 lbs	12.9%	1	00-02-06
Total Load Deflection	L/999 (0.124")	n/a	n/a	4	07-09-10
Live Load Deflection	L/999 (0.082")	n/a	n/a	5	07-09-10
Max Defl.	0.124"	n/a	n/a	4	07-09-10
Span / Depth	15.5				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	311 lbs	8.5%	18.5%	Spruce-Pine-Fir
B2	Wall/Plate 6-7/8" x 2-1/2"	326 lbs	3.1%	17.0%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum Total load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

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F7-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 22:30:22

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

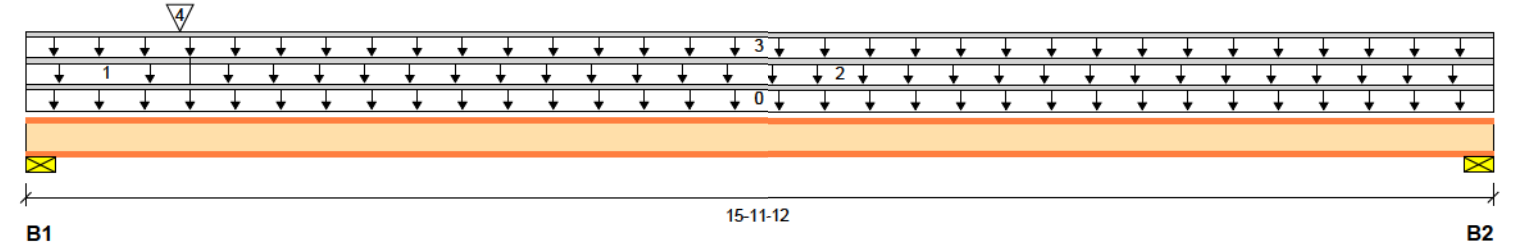
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 15-11-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	627 / 0	258 / 0		
B2, 6-7/8"	188 / 0	91 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
2		Unf. Lin. (lb/ft)	L	01-09-06	15-11-12	Top	9	3			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top	8	3			n/a
4	F4	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Back	446	171			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1956 ft-lbs	5305 ft-lbs	36.9%	1	05-01-11
End Reaction	1263 lbs	1684 lbs	75.0%	1	00-00-00
End Shear	1234 lbs	2350 lbs	52.5%	1	00-02-06
Total Load Deflection	L/888 (0.207")	n/a	27.0%	4	07-01-06
Live Load Deflection	L/1292 (0.142")	n/a	27.9%	5	07-01-06
Max Defl.	0.207"	n/a	20.7%	4	07-01-06
Span / Depth	15.5				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1263 lbs	34.6%	75.0%	Spruce-Pine-Fir
B2	Wall/Plate 6-7/8" x 2-1/2"	396 lbs	3.7%	20.7%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum Total load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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F7-C

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 22:30:22

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

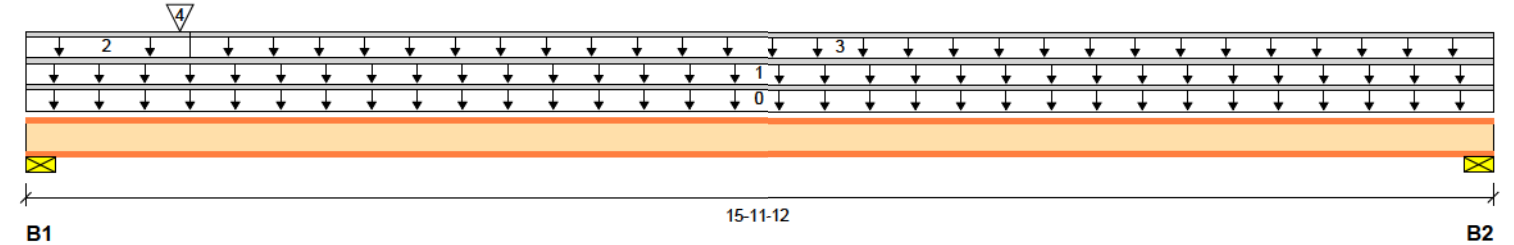
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 15'-11-12"

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	731 / 0	297 / 0		
B2, 6-7/8"	468 / 0	196 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	15-11-12	Top	24	9			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
3		Unf. Lin. (lb/ft)	L	01-09-06	15-11-12	Top	29	11			n/a
4	F4	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Front	284	110			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	3677 ft-lbs	5305 ft-lbs	69.3%	1	07-03-11
End Reaction	1468 lbs	1684 lbs	87.1%	1	00-00-00
End Shear	1433 lbs	2350 lbs	61.0%	1	00-02-06
Total Load Deflection	L/467 (0.394")	n/a	51.4%	4	07-08-07
Live Load Deflection	L/662 (0.278")	n/a	54.4%	5	07-08-07
Max Defl.	0.394"	n/a	39.4%	4	07-08-07
Span / Depth	15.5				

Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1468 lbs	40.2%	87.1%	Spruce-Pine-Fir
B2	Wall/Plate 6-7/8" x 2-1/2"	947 lbs	9.0%	49.4%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum Total load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

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F7-D

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 22:30:22

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

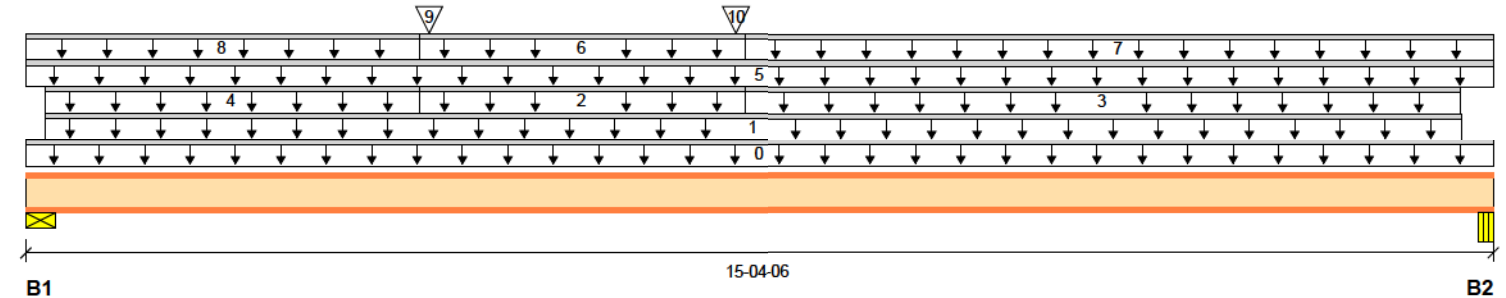
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	424 / 0	234 / 0		
B2, 4-1/8"	361 / 0	202 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	15-04-06	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-06	15-00-06	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	04-01-06	07-06-06	Top		4			n/a
3		Unf. Lin. (lb/ft)	L	07-06-06	15-00-05	Top		1			n/a
4		Unf. Lin. (lb/ft)	L	00-02-06	04-01-06	Top		1			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	15-04-06	Top	21	8			n/a
6		Unf. Lin. (lb/ft)	L	04-01-06	07-06-06	Top	32	12			n/a
7		Unf. Lin. (lb/ft)	L	07-06-06	15-04-06	Top	9	3			n/a
8		Unf. Lin. (lb/ft)	L	00-00-00	04-01-06	Top	9	3			n/a
9	F3	Conc. Pt. (lbs)	L	04-02-10	04-02-10	Front	99	51			n/a
10	F3	Conc. Pt. (lbs)	L	07-05-02	07-05-02	Front	145	74			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3971 ft-lbs	5305 ft-lbs	74.9%	1	07-05-02
End Reaction	928 lbs	1684 lbs	55.1%	1	00-00-00
End Shear	916 lbs	2350 lbs	39.0%	1	00-02-06
Total Load Deflection	L/470 (0.382")	n/a	51.1%	4	07-05-02
Live Load Deflection	L/729 (0.246")	n/a	49.4%	5	07-05-02
Max Defl.	0.382"	n/a	38.2%	4	07-05-02
Span / Depth	15.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	928 lbs	25.4%	55.1%	Spruce-Pine-Fir
B2	Beam 4-1/8" x 2-1/2"	793 lbs	12.5%	41.4%	Spruce-Pine-Fir

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

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

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

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F7-D

Dry | 1 span | No cant.

December 17, 2020 22:30:22

BC CALC® Member Report

Build 7364

Job name:

File name: C:\Users\rochavillo\Docu...\GLENWAY 3A (ELEV.2).isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA).

Completeness must be reviewed by a qualified engineering expert to ensure that anyone relying on the evidence of application of building code properties & Installation engineered accordance Guide and obtain Installation questions, before installation.



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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

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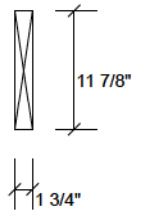
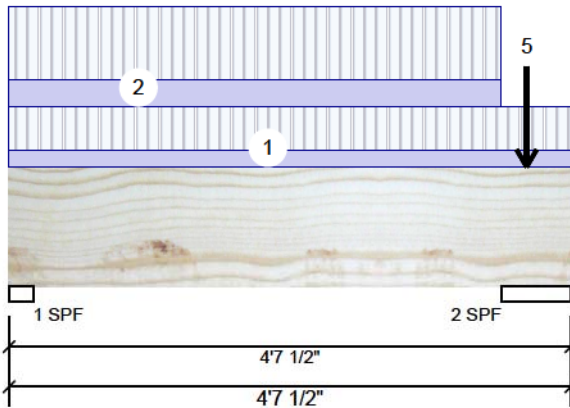


Client: GREENPARK
Project:
Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Date: 12/18/2020
Input by: RCO
Job Name: GLENWAY 3A (ELEV.2)
Project #:

F1-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	136	61	0	0
2	332	184	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	11%	76 / 204	281 L	1.25D+1.5L
2 - SPF	6.875"	10%	230 / 498	729 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	261 ft-lb	2'1 1/2"	17130 ft-lb	0.015 (2%)	1.25D+1.5L	L
Unbraced	261 ft-lb	2'1 1/2"	11299 ft-lb	0.023 (2%)	1.25D+1.5L	L
Shear	132 lb	3'1 1/2"	5798 lb	0.023 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/33107)	2'1 9/16"	0.133 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/22843)	2'1 9/16"	0.199 (L/240)	0.010 (1%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Tie-In	0-0-0 to 4-7-8	0-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-0-10		Top	15 PLF	40 PLF	0 PLF	0 PLF	
3	Point	4-3-2		Top	71 lb	190 lb	0 lb	0 lb	J9
4	Point	4-3-2		Top	2 lb	5 lb	0 lb	0 lb	J1
5	Point	4-3-2		Top	48 lb	0 lb	0 lb	0 lb	Wall Self W
	Self Weight				5 PLF				



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Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 10/15/2022

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400

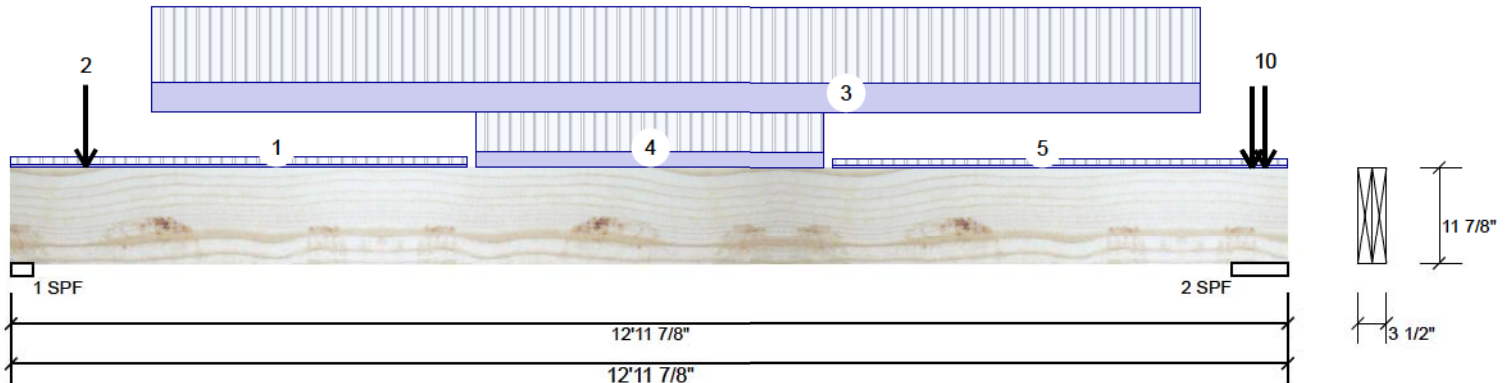




Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/18/2020
Input by: RCO
Job Name: GLENWAY 3A (ELEV.2)
Project #:

F2-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2447	979	0	0
2	5402	2242	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	87% 1224 / 3671	4895	L	1.25D+1.5L
2 - SPF	6.875"	74% 2802 / 8103	10905	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16721 ft-lb	6'4 5/16"	34261 ft-lb	0.488 (49%)	1.25D+1.5L	L
Unbraced	16721 ft-lb	6'4 5/16"	27196 ft-lb	0.615 (61%)	1.25D+1.5L	L
Shear	5217 lb	1'1 3/4"	11596 lb	0.450 (45%)	1.25D+1.5L	L
Perm Defl in.	0.101 (L/1468)	6'3 15/16"	0.411 (L/360)	0.250 (25%)	D	Uniform
LL Defl inch	0.253 (L/584)	6'3 15/16"	0.411 (L/360)	0.620 (62%)	L	
TL Defl inch	0.354 (L/418)	6'3 15/16"	0.616 (L/240)	0.570 (57%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Tie-In	0-0-0 to 4-7-10	0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-2		Near Face	123 lb	328 lb	0 lb	0 lb	J9
3	Part. Uniform	1-5-2 to 12-1-2		Near Face	128 PLF	341 PLF	0 PLF	0 PLF	
4	Part. Uniform	4-8-12 to 8-3-4		Top	68 PLF	180 PLF	0 PLF	0 PLF	
5	Tie-In	8-4-6 to 12-11-14	0-8-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 10/15/2022



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400

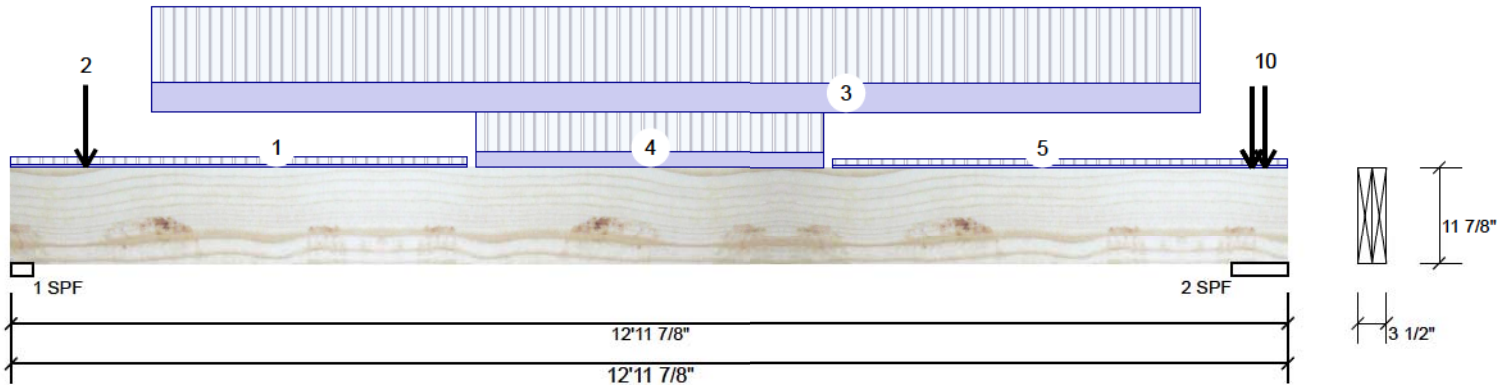




Client: GREENPARK
 Project:
 Address: TRINAR HALL
 EAST GWILLIMBURY, ON.

Date: 12/18/2020
 Input by: RCO
 Job Name: GLENWAY 3A (ELEV.2)
 Project #:

F2-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	12-7-8		Top	1087 lb	2674 lb	0 lb	0 lb	F2 F2
7	Point	12-7-8		Top	73 lb	194 lb	0 lb	0 lb	J9
8	Point	12-7-8		Top	57 lb	0 lb	0 lb	0 lb	Wall Self Weight
9	Point	12-7-8		Top	5 lb	0 lb	0 lb	0 lb	Wall Self Weight
10	Point	12-9-2		Near Face	44 lb	106 lb	0 lb	0 lb	J9
	Self Weight				10 PLF				

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Notes

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Lumber

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chemicals

Handling & Installation

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5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

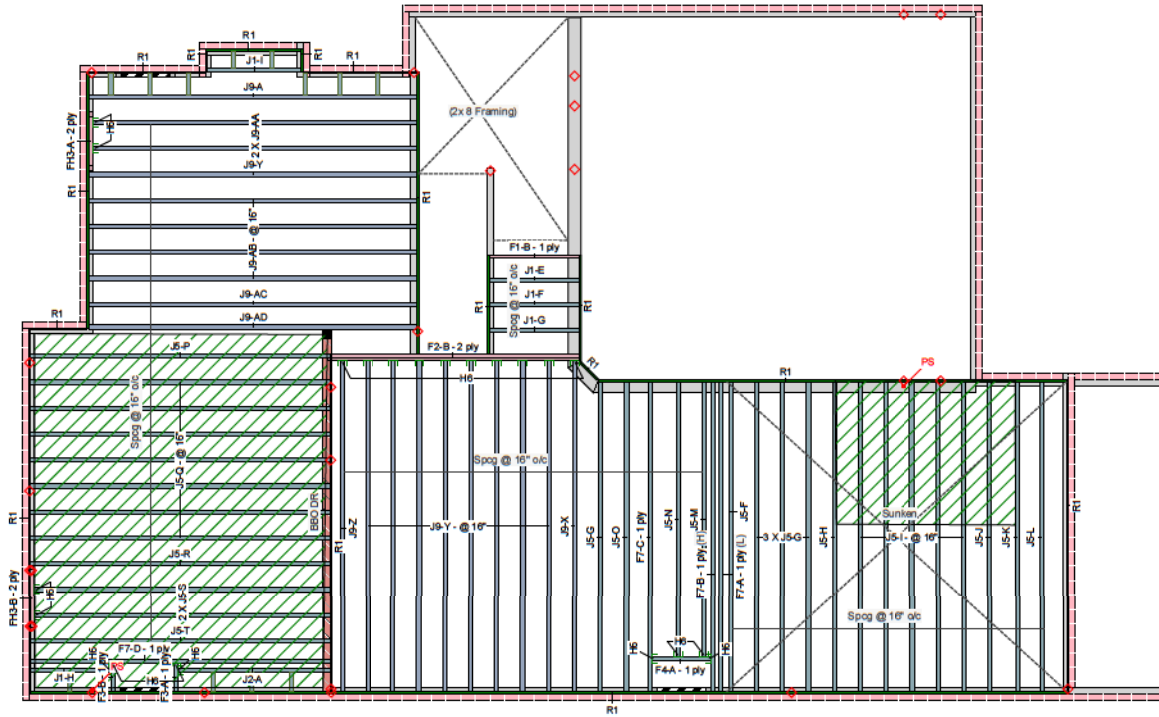
Forex
 APA: PR-L318

This design is valid until 10/15/2022

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400





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

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

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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400	
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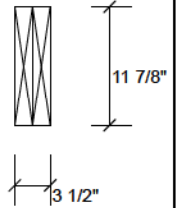
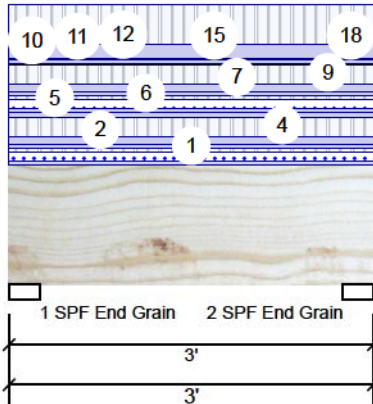
This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them.



Client: GREENPARK
 Project:
 Address: TRINAR HALL
 EAST GWILLIMBURY, ON.

Date: 12/17/2020
 Input by: RCO
 Job Name: GLENWAY 3A (ELEV.2) DECK CONDITION
 Project #:

FH3-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1083	735	234	0
2	1084	736	234	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	36%	919 / 1858	2777	L	1.25D+1.5L +S
2 - SPF End Grain	3.000"	36%	920 / 1860	2780	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1596 ft-lb	1'6"	34261 ft-lb	0.047 (5%)	1.25D+1.5L +S	L
Unbraced	1596 ft-lb	1'6"	34261 ft-lb	0.047 (5%)	1.25D+1.5L +S	L
Shear	1840 lb	1'2 1/8"	11596 lb	0.159 (16%)	1.25D+1.5L +S	L
Perm Defl in.	0.002 (L/18451)	1'6"	0.088 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.003 (L/11301)	1'6"	0.088 (L/360)	0.030 (3%)	L+0.5S	L
TL Defl inch	0.004 (L/7008)	1'6"	0.131 (L/240)	0.030 (3%)	D+L+0.5S	L

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Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Part. Uniform	0-0-0 to 3-0-0		Top	34 PLF	24 PLF	78 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self W
4	Part. Uniform	0-0-0 to 3-0-0		Top	63 PLF	168 PLF	0 PLF	0 PLF	J9
5	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self W

Continued on page 2...

Notes

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Lumber

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

chemicals

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
- 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

Manufacturer Info

Forex
 APA: PR-L318

This design is valid until 10/15/2022



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Sewage System			
Zoning			

905-642-4400

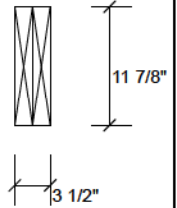
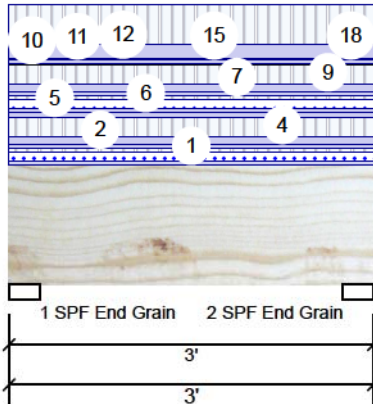




Client: GREENPARK
 Project:
 Address: TRINAR HALL
 EAST GWILLIMBURY, ON.

Date: 12/17/2020
 Input by: RCO
 Job Name: GLENWAY 3A (ELEV.2) DECK CONDITION
 Project #:

FH3-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Part. Uniform	0-0-0 to 3-0-0		Near Face	34 PLF	24 PLF	78 PLF	0 PLF	
7	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Part. Uniform	0-0-0 to 3-0-0		Near Face	63 PLF	168 PLF	0 PLF	0 PLF	J9
10	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Tapered Start	0-0-0		Near Face	1 PLF	2 PLF	0 PLF	0 PLF	
	End	1-1-9			2 PLF	5 PLF	0 PLF	0 PLF	
12	Part. Uniform	0-0-0 to 3-0-0		Near Face	125 PLF	334 PLF	0 PLF	0 PLF	J9
15	Tapered Start	1-1-9		Near Face	2 PLF	5 PLF	0 PLF	0 PLF	
	End	2-5-9			2 PLF	5 PLF	0 PLF	0 PLF	
18	Tapered Start	2-5-9		Near Face	2 PLF	5 PLF	0 PLF	0 PLF	
	End	3-0-0			2 PLF	4 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF				

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Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

This design is valid until 10/15/2022

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400

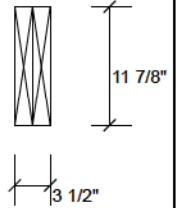
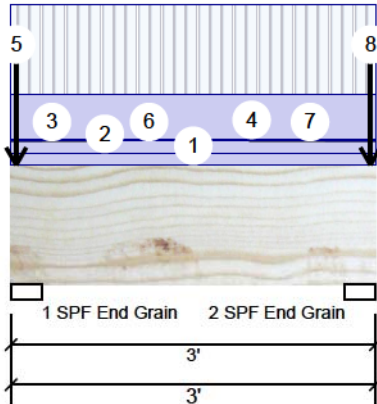




Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/17/2020
Input by: RCO
Job Name: GLENWAY 3A (ELEV.2) DECK CONDITION
Project #:

FH3-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	514	446	169	0
2	513	446	169	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	19%	557 / 940	1497 L	1.25D+1.5L +S
2 - SPF End Grain	3.000"	19%	557 / 939	1496 L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	657 ft-lb	1'6"	34261 ft-lb	0.019 (2%)	1.25D+1.5L	L
Unbraced	657 ft-lb	1'6"	34261 ft-lb	0.019 (2%)	1.25D+1.5L	L
Shear	940 lb	1'9 7/8"	11596 lb	0.081 (8%)	1.25D+1.5L	L
Perm Defl in. (L/37791)	0.001	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch (L/29305)	0.001	1'6"	0.088 (L/360)	0.010 (1%)	L+0.5S	L
TL Defl inch (L/16506)	0.002	1'6"	0.131 (L/240)	0.010 (1%)	D+L+0.5S	L

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

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



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self V
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self V
3	Tapered Start	0-0-0		Near Face	1 PLF	3 PLF	0 PLF	0 PLF	
	End	0-7-9			2 PLF	5 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 10/15/2022



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400

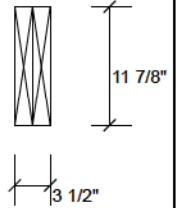
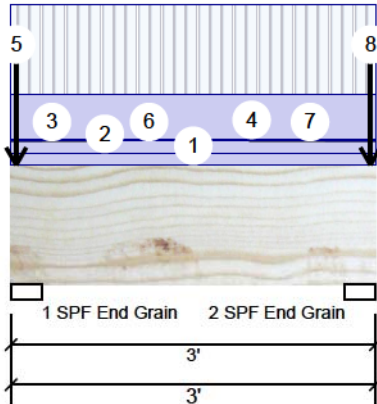




Client: GREENPARK
 Project:
 Address: TRINAR HALL
 EAST GWILLIMBURY, ON.

Date: 12/17/2020
 Input by: RCO
 Job Name: GLENWAY 3A (ELEV.2) DECK CONDITION
 Project #:

FH3-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-0-0		Near Face	148 PLF	304 PLF	0 PLF	0 PLF	J5
5	Point	0-0-8		Top	87 lb	51 lb	169 lb	0 lb	Header Column Header Column
6	Tapered Start	0-7-9		Near Face	2 PLF	5 PLF	0 PLF	0 PLF	
	End	1-11-9			2 PLF	5 PLF	0 PLF	0 PLF	
7	Tapered Start	1-11-9		Near Face	2 PLF	5 PLF	0 PLF	0 PLF	
	End	3-0-0			1 PLF	2 PLF	0 PLF	0 PLF	
8	Point	2-11-8		Top	87 lb	51 lb	169 lb	0 lb	Header Column Header Column
	Self Weight				10 PLF				

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



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Lumber

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chemicals

Handling & Installation

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3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

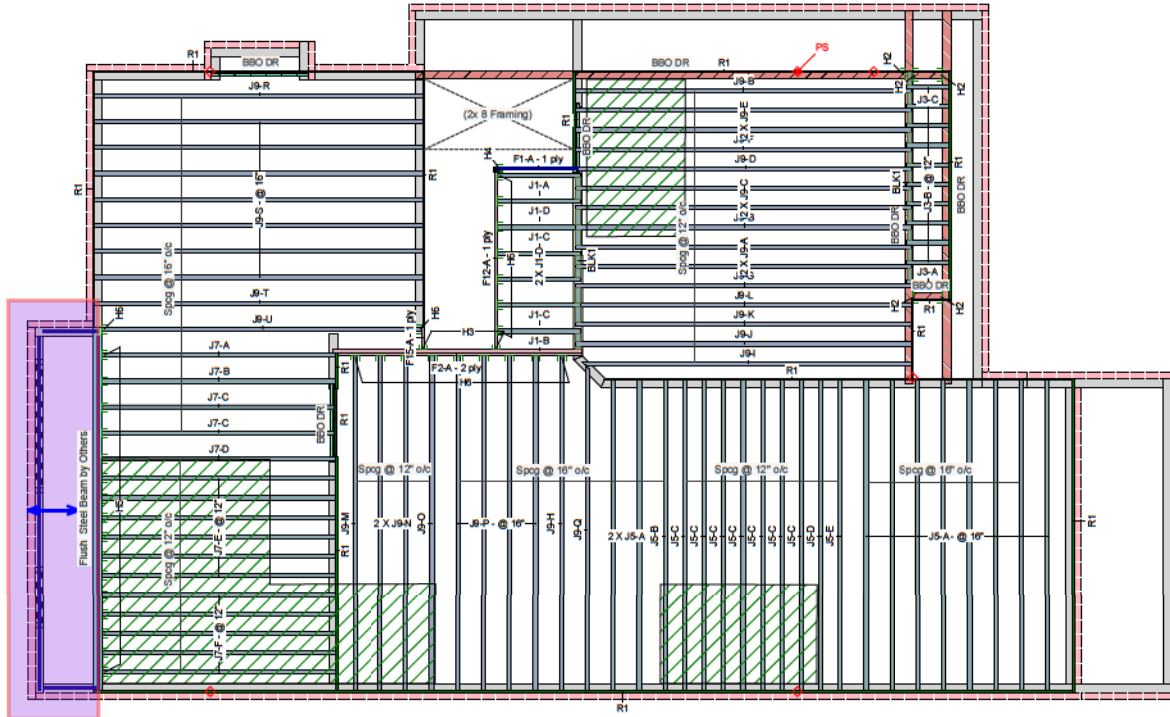
Forex
 APA: PR-L318

This design is valid until 10/15/2022

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400





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



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F2	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	14-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	11.875			1	10-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F15	Forex 2.0E-3000Fb LVL	1.75	11.875			1	2-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J5	AJS 140	2.5	11.875			20	16-0-0
J7	AJS 140	2.5	11.875			16	12-0-0
J1	AJS 140	2.5	11.875			7	6-0-0
J3	AJS 140	2.5	11.875			11	4-0-0
J9	AJS 20	2.5	11.875			35	18-0-0

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	11.875	1 in R		Varies	13-0-0

Rim Board

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			17	12-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H2	5	Unknown Hanger				
H3	2	HUS1.81/10			30 16d	10 16d
H4	1	HUC Q1.18/9-SDS				
H5	16	LF2511			12 10d	1 #8x1 1/4WS
H6	1	LF2511				
H6	16	LF2511				

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

Legend

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

JOB INFORMATION

Builder	GREENPARK
Project	TRINAR HALL EAST GWILLIMBURY, ON.
Shipping	
Sales Rep	
Designer	RCO
Plotted	December 17, 2020
Layout Name	GLENWAY 3A (ELEV.2)
Job Path	C:\Users\rochavillo\Documents\WORK FROM HOME\GREENPARK\TRINAR HALL\GLENWAY 3A ELEV 2\FLOOR\GLENWAY 3A (ELEV.2).isl

DESIGN CRITERIA

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

Floor

Live	40
Dead	15

Deflection Joist

LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360

Deflection Girder

LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	360

Decking

Decking	SPF Plywood
Thickness	5/8"
Fastener	Nailed & Glued

Vibration

Ceiling:	Gypsum 1/2"
----------	-------------

CCMC References

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

Kott Lumber Company

14 Anderson Blvd
Stouffville, Ontario
Canada
L4A 7X4
905-642-4400



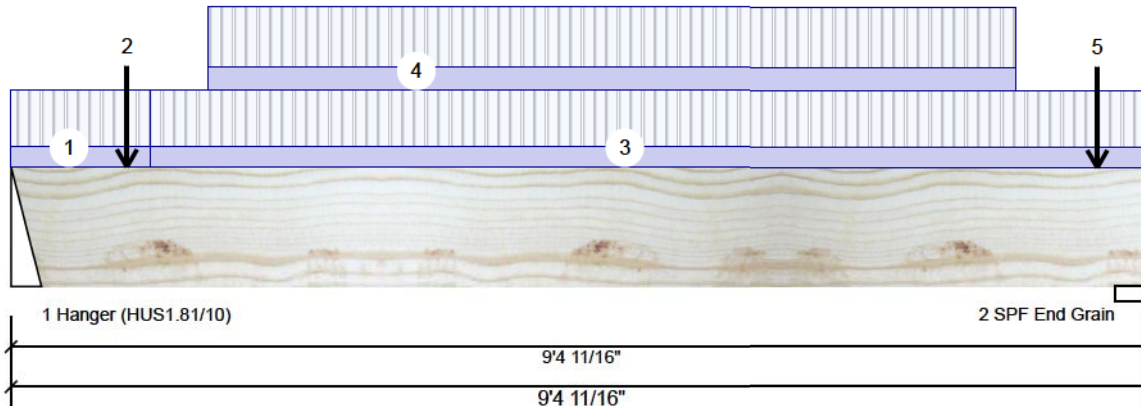


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/17/2020
Input by: RCO
Job Name: GLENWAY 3A (ELEV.2)
Project #:

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

Level: Second Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	695	285	0	0
2	715	293	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	36%	356 / 1043	1398	L	1.25D+1.5L
2 - SPF End Grain	3.500"	32%	366 / 1072	1438	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3129 ft-lb	4'8"	17130 ft-lb	0.183 (18%)	1.25D+1.5L	L
Unbraced	3129 ft-lb	4'8"	5011 ft-lb	0.624 (62%)	1.25D+1.5L	L
Shear	1236 lb	1'2 1/8"	5798 lb	0.213 (21%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/4806)	4'8 1/16"	0.299 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.055 (L/1968)	4'8 1/16"	0.299 (L/360)	0.180 (18%)	L	
TL Defl inch	0.077 (L/1396)	4'8 1/16"	0.449 (L/240)	0.170 (17%)	D+L	L

Design Notes

- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-1-13	1-10-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-7		Near Face	37 lb	99 lb	0 lb	0 lb	J1
3	Tie-In	1-1-13 to 9-4-11	1-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	1-7-7 to 8-3-7		Near Face	31 PLF	81 PLF	0 PLF	0 PLF	
5	Point	8-11-7		Near Face	26 lb	69 lb	0 lb	0 lb	J1
	Self Weight				5 PLF				



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Notes

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Lumber

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

chemicals

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
- 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

Manufacturer Info

Forex
APA: PR-L318

This design is valid until 10/15/2022

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400



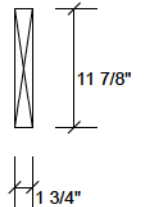
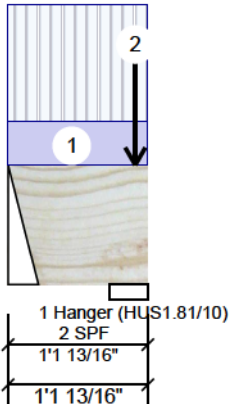


Client: GREENPARK
 Project:
 Address: TRINAR HALL
 EAST GWILLIMBURY, ON.

Date: 12/17/2020
 Input by: RCO
 Job Name: GLENWAY 3A (ELEV.2)
 Project #:

F15-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	41	18	0	0
2	195	76	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	2%	22 / 61	83 L	1.25D+1.5L
2 - SPF	3.813"	9%	95 / 292	387 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10 ft-lb	6 1/2"	17130 ft-lb	0.001 (0%)	1.25D+1.5L	L
Unbraced	10 ft-lb	6 1/2"	17130 ft-lb	0.001 (0%)	1.25D+1.5L	L
Shear	56 lb	1'2 1/8"	5798 lb	0.010 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom 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 1-1-13	1-10-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-0-9		Far Face	56 lb	149 lb	0 lb	0 lb	J9
	Self Weight				5 PLF				



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Lumber

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- LVL not to be treated with fire retardant or corrosive

chemicals

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
- 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

Manufacturer Info

Forex
 APA: PR-L318

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400



This design is valid until 10/15/2022

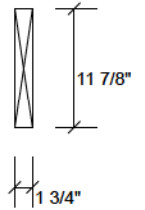
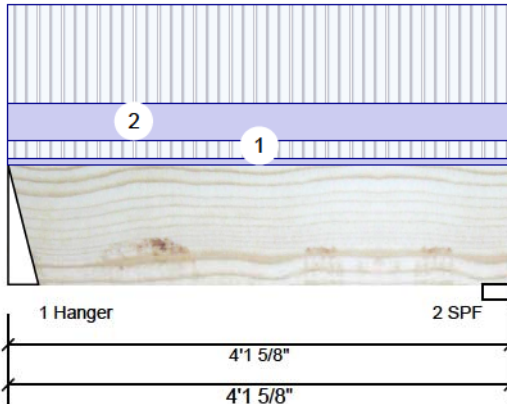


Client: GREENPARK
Project:
Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Date: 12/17/2020
Input by: RCO
Job Name: GLENWAY 3A (ELEV.2)
Project #:

F1-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	98	47	0	0
2	97	46	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	5%	58 / 147	206 L	1.25D+1.5L
2 - SPF	2.750"	7%	58 / 146	204 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	177 ft-lb	2' 15/16"	17130 ft-lb	0.010 (1%)	1.25D+1.5L	L
Unbraced	177 ft-lb	2' 15/16"	11809 ft-lb	0.015 (1%)	1.25D+1.5L	L
Shear	89 lb	1'2 1/8"	5798 lb	0.015 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/49670)	2'1"	0.126 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/33657)	2'1"	0.189 (L/240)	0.010 (1%)	D+L	L

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

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



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

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



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Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400



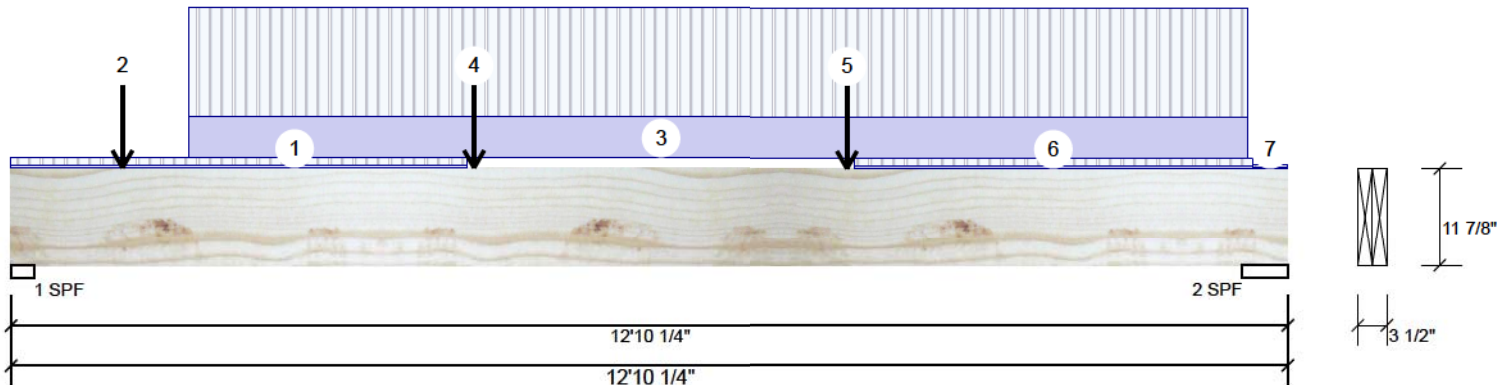
This design is valid until 10/15/2022



Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/17/2020
Input by: RCO
Job Name: GLENWAY 3A (ELEV.2)
Project #:

F2-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Second Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2339	954	0	0
2	2674	1087	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.750"	79%	1193 / 3509	4702 L	1.25D+1.5L
2 - SPF	5.500"	45%	1359 / 4012	5371 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16468 ft-lb	6'11 3/16"	34261 ft-lb	0.481 (48%)	1.25D+1.5L	L
Unbraced	16468 ft-lb	6'11 3/16"	27232 ft-lb	0.605 (60%)	1.25D+1.5L	L
Shear	5297 lb	1'1 7/8"	11596 lb	0.457 (46%)	1.25D+1.5L	L
Perm Defl in.	0.102 (L/1449)	6'5 1/4"	0.410 (L/360)	0.250 (25%)	D	Uniform
LL Defl inch	0.251 (L/588)	6'5 1/4"	0.410 (L/360)	0.610 (61%)	L	
TL Defl inch	0.353 (L/418)	6'5 1/4"	0.615 (L/240)	0.570 (57%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comment
1	Tie-In	0-0-0 to 4-7-0	0-7-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-1-7		Near Face	165 lb	429 lb	0 lb	0 lb	J9
3	Part. Uniform	1-9-7 to 12-5-7		Near Face	129 PLF	342 PLF	0 PLF	0 PLF	
4	Point	4-7-14		Far Face	18 lb	41 lb	0 lb	0 lb	F15
5	Point	8-5-0		Far Face	285 lb	695 lb	0 lb	0 lb	F12
6	Tie-In	8-5-14 to 12-6-0	0-6-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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Lumber

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

chemicals

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
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6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

905-642-4400

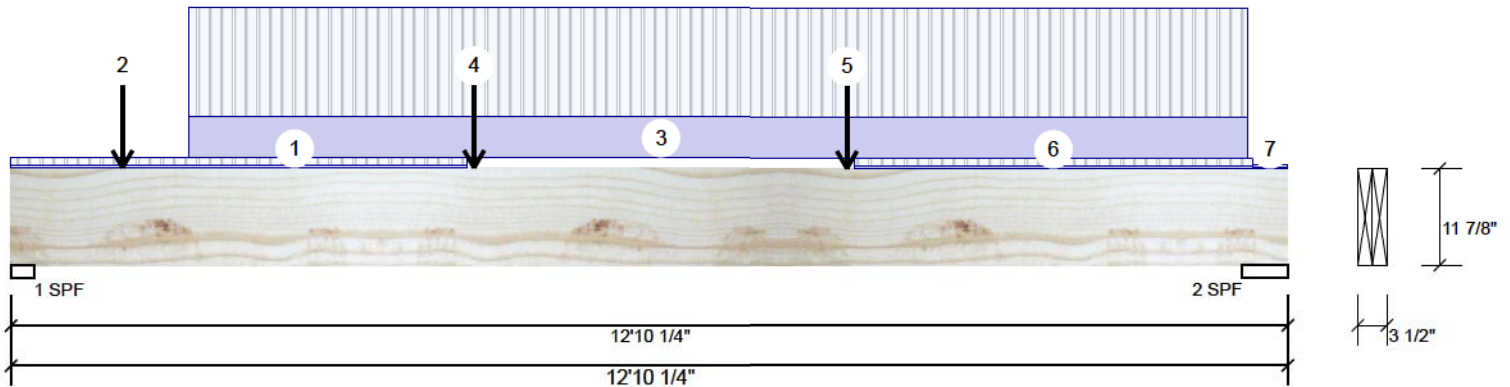




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...Continued from page 1

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

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