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 "Multi-ply Connection Details".
4. Pass-thru transfer block framing is required at all point loads over bearings.

HANDLING AND INSTALLATION

Do not drill any hole, cut or notch a certified building comp :n pre-authorization.

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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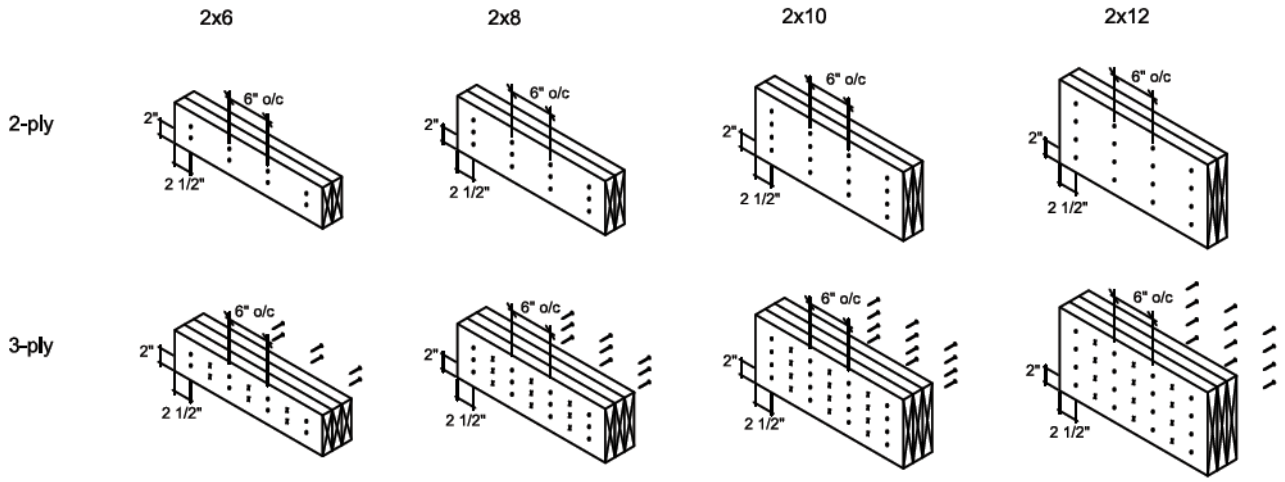
Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

KOTT

Conventional Connections



Conventional connection notes:

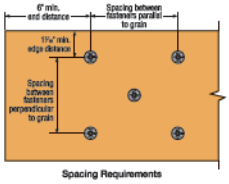
-Nails to be 3" long wire nails.
-Nails to be located 2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

SIMPSON SDW SPACING REQUIREMENT

Table 9 — Spacing Requirements

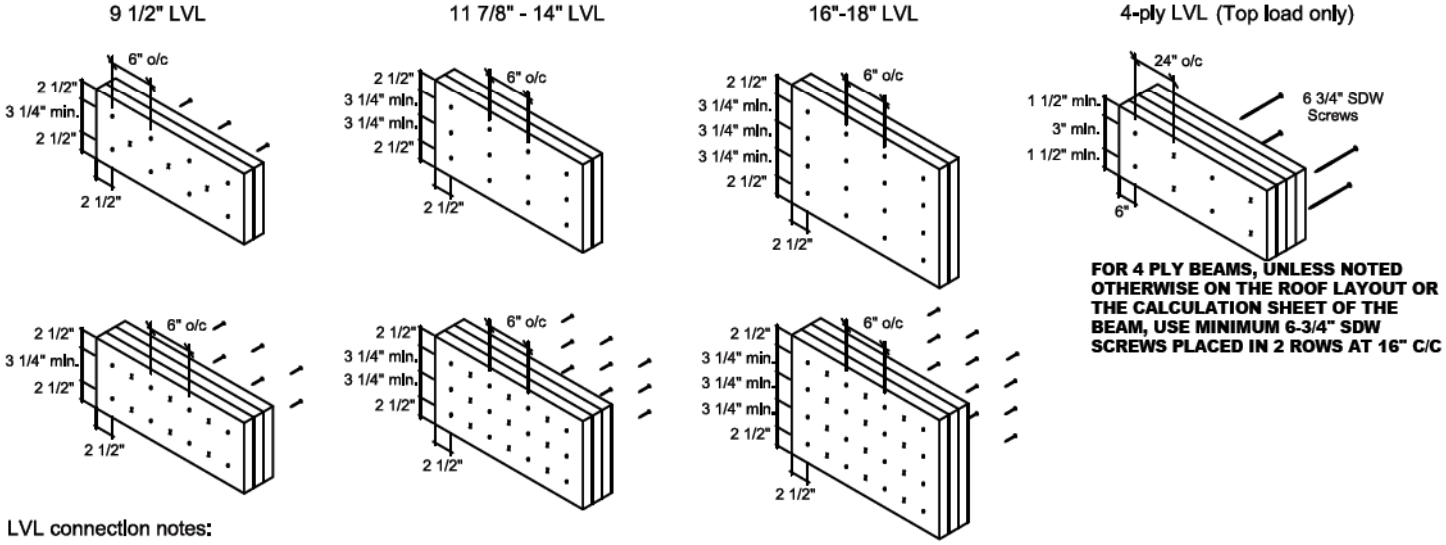
Geometry	Minimum Dimensions (in.)	
	D.Fir-L	S-P-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	3	2½
Edge distance perpendicular to grain	1¾	1¾

1. Additional screws may be staggered diagonally between rows.



LVL Connections

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



FOR 4 PLY BEAMS, UNLESS NOTED OTHERWISE ON THE ROOF LAYOUT OR THE CALCULATION SHEET OF THE BEAM, USE MINIMUM 6-3/4" SDW SCREWS PLACED IN 2 ROWS AT 16" C/C

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.

Multiple Member Connections

All connections are for uniformly distributed loads.

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

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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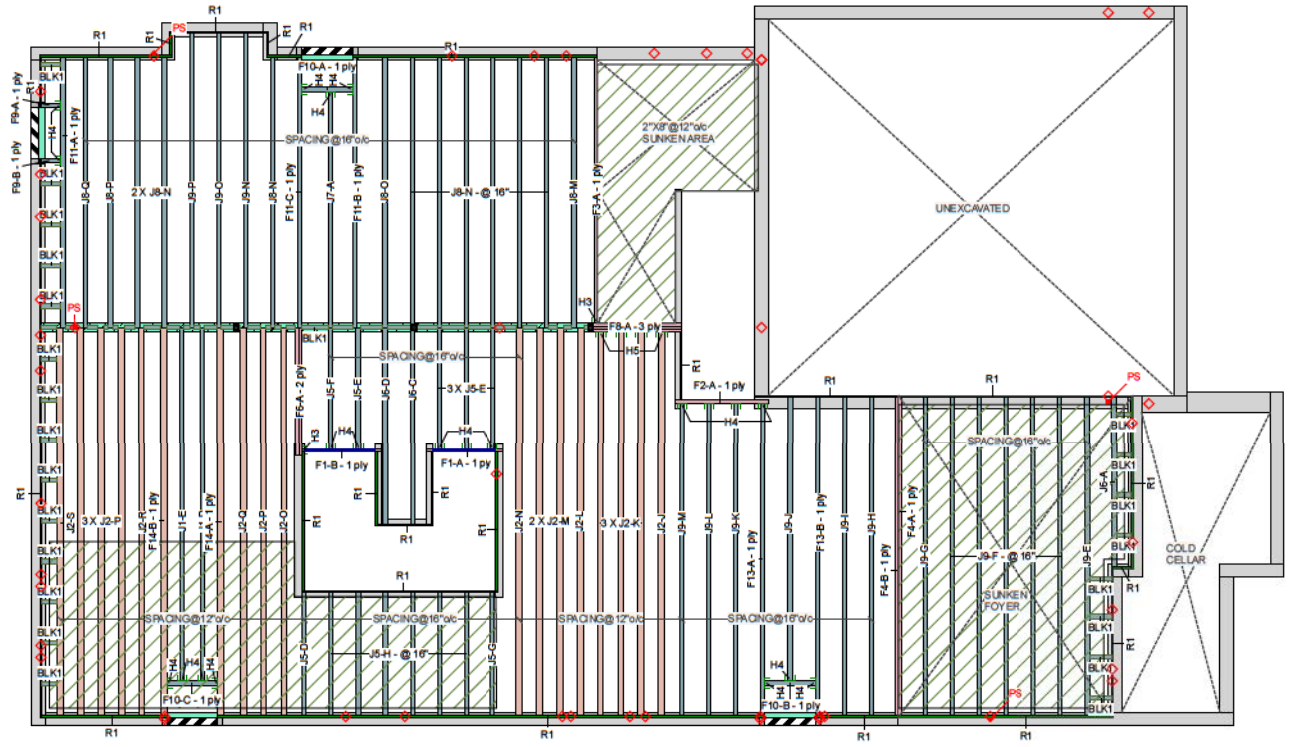
Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

TT Inc.
8 Moodie Drive
awa, ON
H 7V1
-838-2775

Ground Floor



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

Version 20.20.002 Powered by iStruct™

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

Ground Floor

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	11.875			2	16-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	11.875			1	14-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	6-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	11.875			2	4-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F13	AJS 140	2.5	11.875			2	16-0-0
F11	AJS 140	2.5	11.875			3	14-0-0
F10	AJS 140	2.5	11.875			3	4-0-0
F9	AJS 140	2.5	11.875			2	2-0-0
J1	AJS 140	2.5	11.875			2	18-0-0
J9	AJS 140	2.5	11.875			16	16-0-0
J8	AJS 140	2.5	11.875			13	14-0-0
J7	AJS 140	2.5	11.875			1	12-0-0
J6	AJS 140	2.5	11.875			3	10-0-0
J5	AJS 140	2.5	11.875			13	8-0-0
F14	AJS 24	3.5	11.875			2	20-0-0
J2	AJS 24	3.5	11.875			16	20-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt		Varies	38-0-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H3	2	HUS1.81/10			30 16d	10 16d
H4	21	LF2511			12 10d	1 #8x1 1/4WS
H5	4	LF3511			12 10d	2 #8x1 1/4WS

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

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.

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.

JOB INFORMATION

Builder
GREENPARK

Project

Shipping

Sales Rep

Designer
R O

Plotted
December 17, 2020

Layout Name
GLENWAY 7A-ELEV. 3-R1

Job Path
S:\CUSTOMERS\GREENPARK\TRINAR HALL \MODELS\GLENWAY 7A\ELEV 3\FLOORS\R1 \GLENWAY 7A-ELEV. 3-R1.isl

DESIGN CRITERIA

Ground Floor

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

Floor

Loads

Live	40
Dead	15

Deflection Joist

LL Span	L/ 480
TL Span	L/ 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/ 240

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

Vibration

Strapping	1"X4", 1 Row at Midspan

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

Kott Lumber Company
14 Anderson Blvd
Stouffville, Ontario
Canada
K2H7V1

KOTT

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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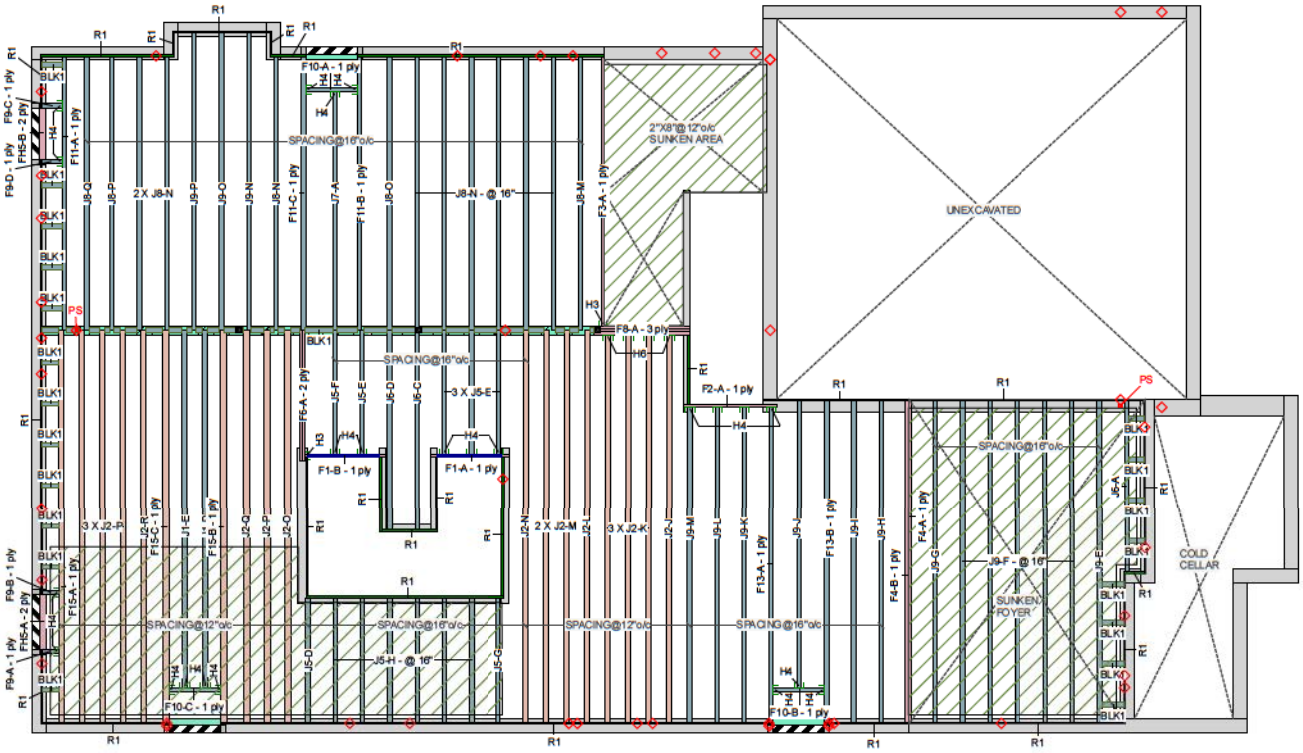
Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Legend
PS — Point Load Support
◇ — Load from Above

Ground Floor



Ground Floor

LVL/LSL

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F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	6-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
FH5	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	4-0-0
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J7	AJS 140	2.5	11.875			1	12-0-0
J6	AJS 140	2.5	11.875			3	10-0-0
J5	AJS 140	2.5	11.875			13	8-0-0
F15	AJS 24	3.5	11.875			3	20-0-0
J2	AJS 24	3.5	11.875			15	20-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt		Varies	37-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H3	2	HUS1.81/10			30 16d	10 16d
H4	23	LF2511			12 10d	1 #8x1 1/4 WS
H6	4	LF3511			12 10d	2 #8x1 1/4 WS

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JOB INFORMATION

Builder
GREENPARK

Project

Shipping

Sales Rep

Designer
R O

Plotted
December 17, 2020

Layout Name
GLENWAY 7A-ELEV. 3-DECK-R1

Job Path
S:\CUSTOMERS\GREENPARK\TRINA R HALL\MODELS\GLENWAY 7A\ELEV 3\FLOORS\R1\DECK COND\GLENWAY 7A-ELEV. 3-DECK-R1.jsi

DESIGN CRITERIA

Ground Floor

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

Floor

Loads

Live	40
Dead	15

Deflection Joist

LL Span L/	480
TL Span L/	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/	240

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

Vibration

Strapping	1"X4", 1 Row at Midspan

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

Kott Lumber Company
14 Anderson Blvd
Stouffville, Ontario
Canada
K2H7V1

KOTT

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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

Legend
PS — Point Load Support
◇ — Load from Above

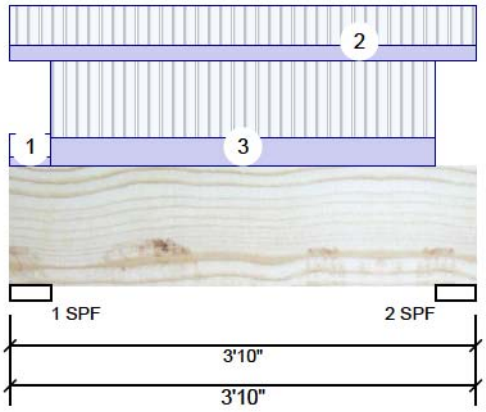
iStructDesign

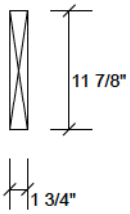
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F1-A 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	644	251	0	0
2	620	242	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	30%	314 / 966	1280	L	1.25D+1.5L
2 - SPF	4.000"	29%	302 / 929	1232	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	981 ft-lb	1'11"	17130 ft-lb	0.057 (6%)	1.25D+1.5L	L
Unbraced	981 ft-lb	1'11"	13098 ft-lb	0.075 (7%)	1.25D+1.5L	L
Shear	719 lb	2'6 7/8"	5798 lb	0.124 (12%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/21591)	1'11"	0.110 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/8386)	1'11"	0.110 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/6040)	1'11"	0.165 (L/240)	0.040 (4%)	D+L	L

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.

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.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top braced at bearings.
3 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-0	1-10-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-10-0		Far Face	47 PLF	125 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-4-0 to 3-6-0		Top	90 PLF	240 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 1/8/2023

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

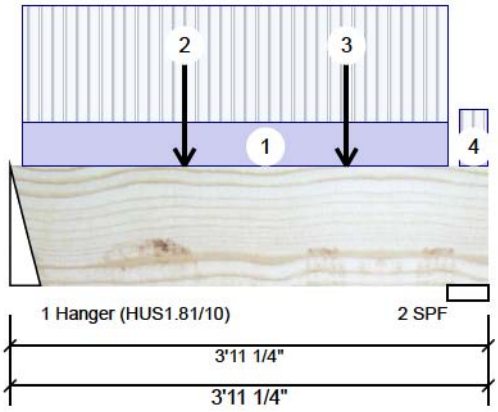
iStructDesign

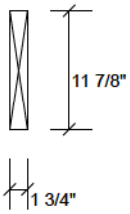
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

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

Level: Ground Floor





Member Information

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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	535	210	0	0
2	550	217	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	27%	263 / 803	1066	L	1.25D+1.5L
2 - SPF	4.000"	25%	271 / 826	1096	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	991 ft-lb	1'9 15/16"	17130 ft-lb	0.058 (6%)	1.25D+1.5L	L
Unbraced	991 ft-lb	1'9 15/16"	12625 ft-lb	0.079 (8%)	1.25D+1.5L	L
Shear	671 lb	2'8 1/8"	5798 lb	0.116 (12%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/21374)	1'10 11/16"	0.116 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/8339)	1'10 5/8"	0.116 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/5999)	1'10 5/8"	0.174 (L/240)	0.040 (4%)	D+L	L

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N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

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	Part. Uniform	0-1-4 to 3-7-4		Top	79 PLF	210 PLF	0 PLF	0 PLF	
2	Point	1-5-4		Far Face	65 lb	174 lb	0 lb	0 lb	J5
3	Point	2-9-4		Far Face	60 lb	159 lb	0 lb	0 lb	J5
4	Tie-In	3-8-6 to 3-11-4	1-10-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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 preve ponding

This design is valid until 1/8/2023

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

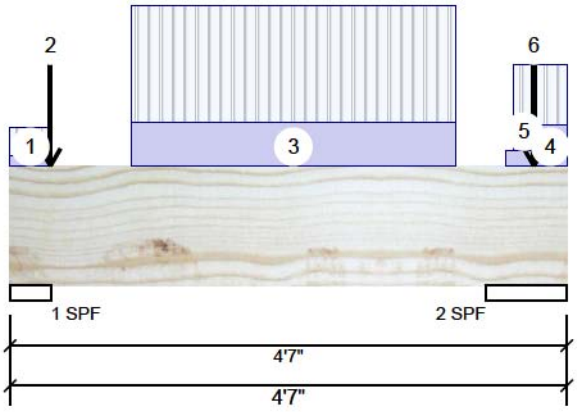
iStructDesign

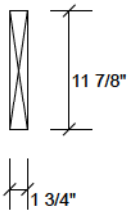
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F2-A 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	526	206	0	0
2	691	301	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	24%	258 / 789	1047	L	1.25D+1.5L
2 - SPF	8.000"	16%	376 / 1037	1413	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	957 ft-lb	2'2 3/16"	17130 ft-lb	0.056 (6%)	1.25D+1.5L	L
Unbraced	957 ft-lb	2'2 3/16"	12012 ft-lb	0.080 (8%)	1.25D+1.5L	L
Shear	973 lb	1'3 1/8"	5798 lb	0.168 (17%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/22494)	2'1 15/16"	0.124 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/8784)	2'1 15/16"	0.124 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/6317)	2'1 15/16"	0.185 (L/240)	0.040 (4%)	D+L	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top braced at bearings.
3 Bottom braced at 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.

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.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-0	1-9-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-4-0		Near Face	51 lb	137 lb	0 lb	0 lb	J9
3	Part. Uniform	1-0-0 to 3-8-0		Near Face	115 PLF	308 PLF	0 PLF	0 PLF	
4	Part. Uniform	4-1-0 to 4-7-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Part. Uniform	4-1-12 to 4-7-0		Top	67 PLF	159 PLF	0 PLF	0 PLF	J9
6	Point	4-3-12		Near Face	69 lb	165 lb	0 lb	0 lb	F13
	Self Weight				5 PLF				

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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 preve ponding

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KOTT

CSD DRAW DESIGN BUILD

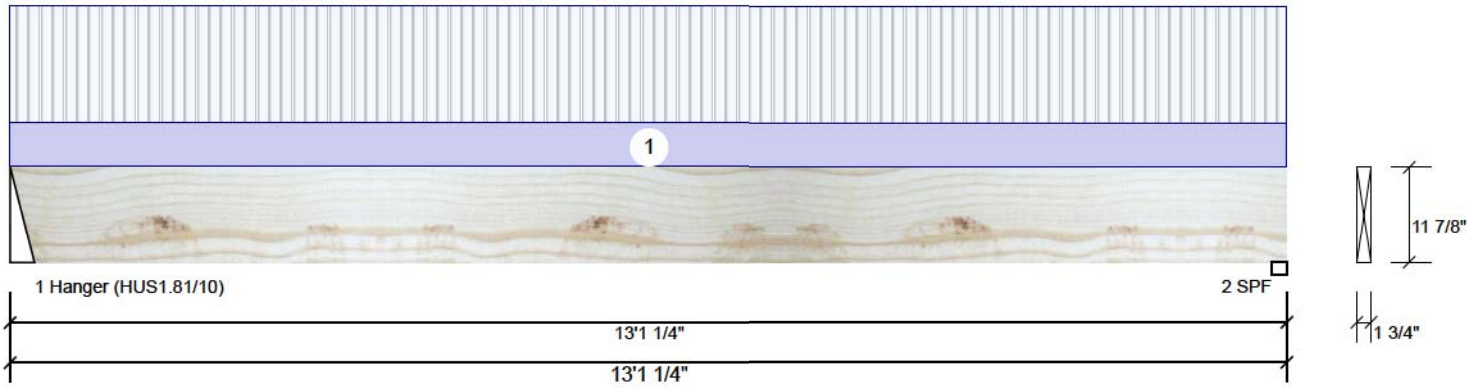
iStructDesign

Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F3-A 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	145	86	0	0
2	142	84	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	8%	107 / 217	324	L	1.25D+1.5L
2 - SPF	1.875"	16%	106 / 214	319	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1009 ft-lb	6'7 3/16"	17130 ft-lb	0.059 (6%)	1.25D+1.5L	L
Unbraced	1009 ft-lb	6'7 3/16"	3506 ft-lb	0.288 (29%)	1.25D+1.5L	L
Shear	266 lb	1'2 1/8"	5798 lb	0.046 (5%)	1.25D+1.5L	L
Perm Defl in.	0.018 (L/8724)	6'7 3/16"	0.427 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.030 (L/5169)	6'7 3/16"	0.427 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.047 (L/3246)	6'7 3/16"	0.641 (L/240)	0.070 (7%)	D+L	L

Design Notes

1 Fill all hanger nailing holes.
2 Girders are designed to be supported on the bottom edge only.
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PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Dec 19, 2020

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-1-4	0-6-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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
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6. For flat roofs provide proper drainage to preve ponding

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KOTT

CSD DRAW DESIGN BUILD

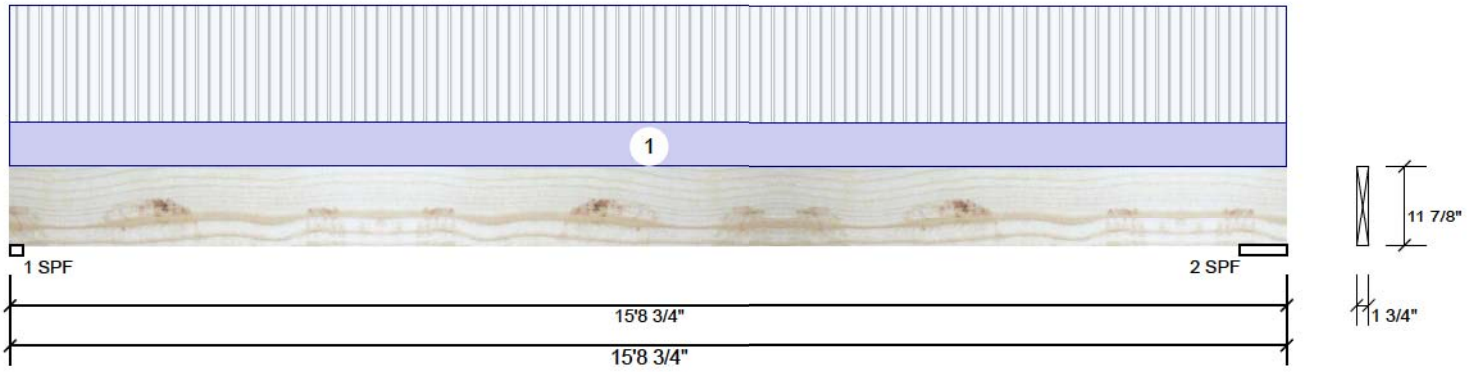
iStructDesign

Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F4-A 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	190	108	0	0
2	200	113	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.875"	21%	134 / 284	419	L	1.25D+1.5L
2 - SPF	6.875"	6%	142 / 300	442	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1565 ft-lb	7'7 7/8"	17130 ft-lb	0.091 (9%)	1.25D+1.5L	L
Unbraced	1565 ft-lb	7'7 7/8"	2973 ft-lb	0.526 (53%)	1.25D+1.5L	L
Shear	360 lb	1'1"	5798 lb	0.062 (6%)	1.25D+1.5L	L
Perm Defl in.	0.036 (L/5028)	7'7 15/16"	0.504 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.064 (L/2852)	7'7 15/16"	0.504 (L/360)	0.130 (13%)	L	L
TL Defl inch	0.100 (L/1820)	7'7 15/16"	0.756 (L/240)	0.130 (13%)	D+L	L

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top braced at bearings.
3 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-8-12	0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Notes

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Lumber

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Handling & Installation

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CSD DRAW DESIGN BUILD

iStructDesign

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Project:
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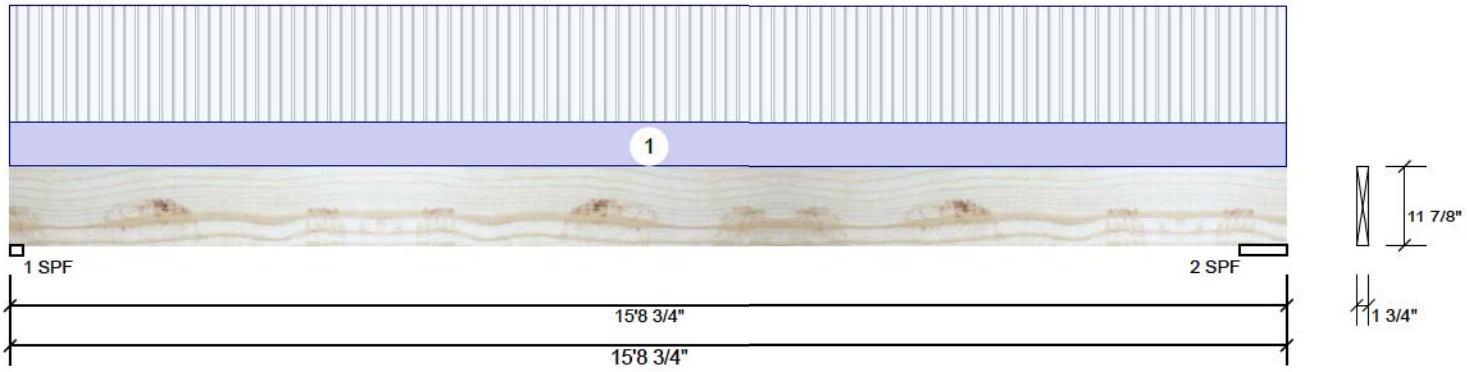
Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F4-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	193	109	0	0
2	204	115	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.875"	21%	136 / 290	426	L	1.25D+1.5L
2 - SPF	6.875"	6%	144 / 306	449	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1591 ft-lb	7'7 7/8"	17130 ft-lb	0.093 (9%)	1.25D+1.5L	L
Unbraced	1591 ft-lb	7'7 7/8"	2973 ft-lb	0.535 (54%)	1.25D+1.5L	L
Shear	366 lb	1'1"	5798 lb	0.063 (6%)	1.25D+1.5L	L
Perm Defl in.	0.037 (L/4966)	7'7 15/16"	0.504 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.065 (L/2799)	7'7 15/16"	0.504 (L/360)	0.130 (13%)	L	L
TL Defl inch	0.101 (L/1790)	7'7 15/16"	0.756 (L/240)	0.130 (13%)	D+L	L

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top braced at bearings.
3 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-8-12	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Notes

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Lumber

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Handling & Installation

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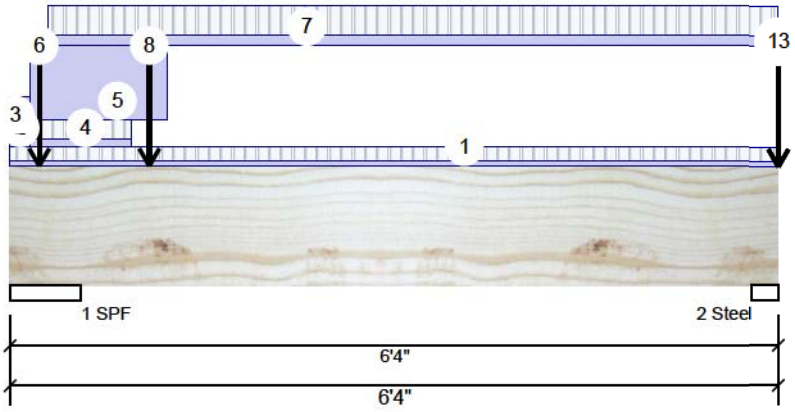
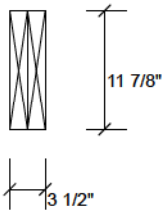
CSD DRAW DESIGN BUILD

Client:	GREENPARK	Date:	12/17/2020
Project:		Input by:	R O
Address:		Job Name:	GLENWAY 7A-ELEV. 3-DECK-R1
		Project #:	

F6-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	1542	749	0	0
2	324	172	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	7.000"	24%	937 / 2313	3250	L	1.25D+1.5L
2 - Steel	2.625"	10%	215 / 487	701	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1514 ft-lb	1'1 3/4"	34261 ft-lb	0.044 (4%)	1.25D+1.5L	L
Unbraced	1514 ft-lb	1'1 3/4"	32772 ft-lb	0.046 (5%)	1.25D+1.5L	L
Shear	1423 lb	1'6 1/8"	11596 lb	0.123 (12%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/25976)	2'10 3/16"	0.189 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.005 (L/12584)	2'9 1/2"	0.189 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.008 (L/8478)	2'9 11/16"	0.283 (L/240)	0.030 (3%)	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.

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.

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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 6-4-0	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tapered Start	0-0-0		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-2-0			4 PLF	10 PLF			
3	Part. Uniform	0-0-0 to 0-2-0		Top	40 PLF	0 PLF			If Weight

Continued on page 2...

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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 preve ponding

This design is valid until 1/8/2023

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

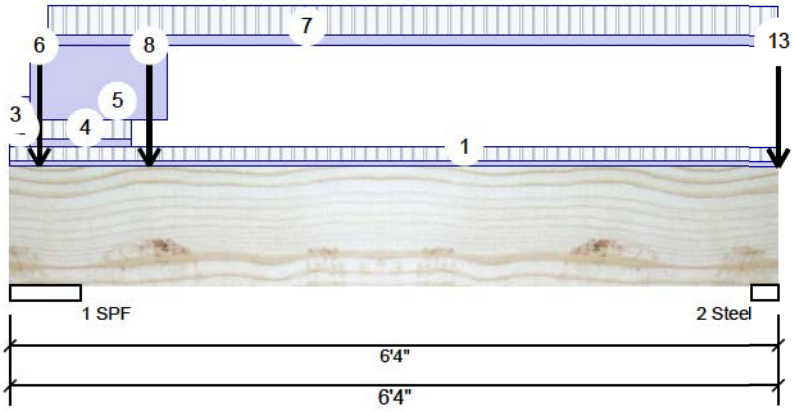
iStructDesign

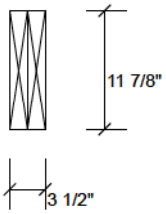
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Tapered Start	0-2-0		Top	8 PLF	21 PLF	0 PLF	0 PLF	
	End	1-0-0			8 PLF	21 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-2-0 to 1-3-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	0-2-14		Near Face	129 lb	329 lb	0 lb	0 lb	F1
7	Tie-In	0-3-12 to 6-4-0	0-9-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Point	1-1-12		Top	488 lb	1179 lb	0 lb	0 lb	F7 F7
11	Point	6-4-0		Top	15 lb	40 lb	0 lb	0 lb	J8
12	Point	6-4-0		Top	6 lb	15 lb	0 lb	0 lb	J4
13	Point	6-4-0		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				10 PLF				

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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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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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KOTT

CSD DRAW DESIGN BUILD

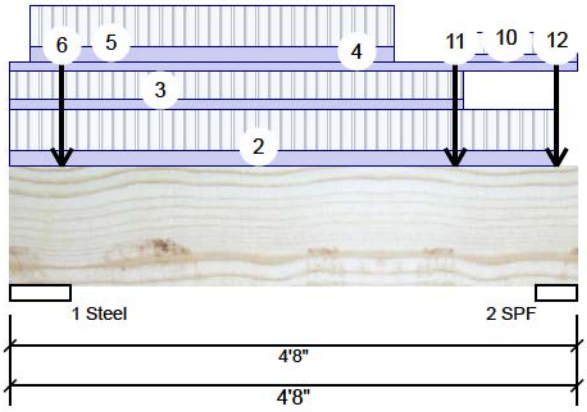
iStructDesign

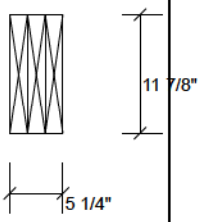
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
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	2551	1218	0	0
2	3239	1458	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Steel	6.000"	23%	1522 / 3827	5349	L	1.25D+1.5L
2 - SPF	4.000"	52%	1823 / 4858	6681	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4169 ft-lb	2'5"	53447 ft-lb	0.078 (8%)	1.25D+1.5L	L
Unbraced	4169 ft-lb	2'5"	53447 ft-lb	0.078 (8%)	1.25D+1.5L	L
Shear	3405 lb	3'4 7/8"	17394 lb	0.196 (20%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/13447)	2'5 1/16"	0.132 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.008 (L/6292)	2'5 1/16"	0.132 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.011 (L/4287)	2'5 1/16"	0.198 (L/240)	0.060 (6%)	D+L	L

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

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Dec 19, 2020

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	Comments
2	Part. Uniform	0-0-0 to 4-5-12		Top	143 PLF	380 PLF	0 PLF	0 PLF	J2
3	Part. Uniform	0-0-0 to 3-8-12		Top	99 PLF	263 PLF	0 PLF	0 PLF	J8
4	Part. Uniform	0-0-0 to 4-8-0		Top	80 PLF	0 PLF			If Weight
5	Part. Uniform	0-2-0 to 3-2-0		Near Face	142 PLF	379 PLF			
6	Point	0-5-2		Far Face	86 lb	145 lb			

Continued on page 2...

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Notes

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Lumber

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Handling & Installation

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905-642-4400

KOTT

CSD DRAW DESIGN BUILD

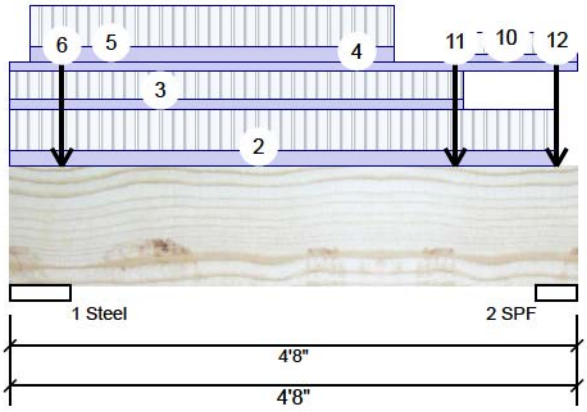
iStructDesign

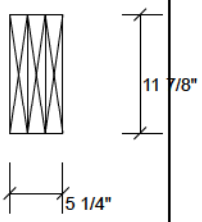
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
10	Part. Uniform	3-6-12 to 4-8-0		Top	73 PLF	196 PLF	0 PLF	0 PLF	J8
11	Point	3-8-0		Near Face	140 lb	374 lb	0 lb	0 lb	J2
12	Point	4-6-0		Top	494 lb	1235 lb	0 lb	0 lb	F5 F5
	Self Weight				14 PLF				

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Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
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K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

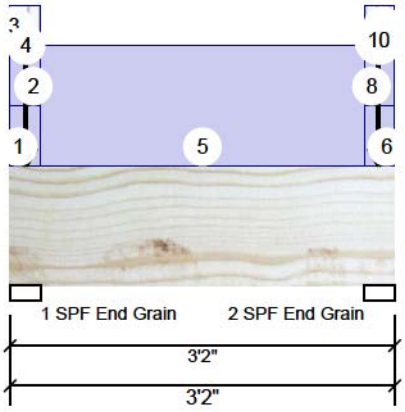
iStructDesign

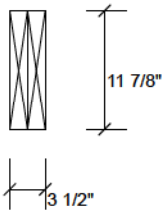
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

FH5-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	80	325	0	0
2	54	314	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	10%	407 / 120	526	L	1.25D+1.5L
2 - SPF End Grain	3.000"	9%	393 / 81	474	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	122 ft-lb	1'7"	22269 ft-lb	0.005 (1%)	1.4D	Uniform
Unbraced	122 ft-lb	1'7"	22269 ft-lb	0.005 (1%)	1.4D	Uniform
Shear	55 lb	1'2 1/8"	7537 lb	0.007 (1%)	1.4D	Uniform
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%)		

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Design Notes

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Near Face	7 PLF	19 PLF	0 PLF	0 PLF	
	End	0-3-0			7 PLF	19 PLF			
4	Point	0-1-9		Top	182 lb	75 lb			Column Header F9

Continued on page 2...

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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isDesign

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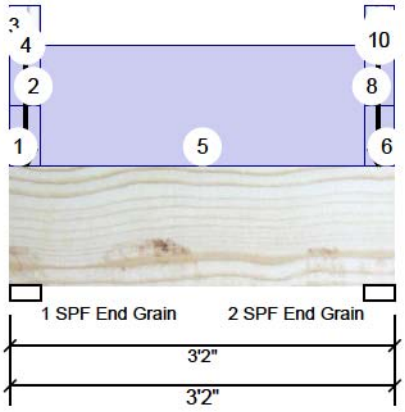

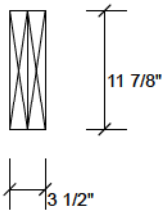

...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	0-3-0 to 2-11-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Part. Uniform	2-11-0 to 3-2-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	2-11-0 to 3-2-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	2-11-0		Near Face	7 PLF	19 PLF	0 PLF	0 PLF	
	End	3-2-0			7 PLF	19 PLF	0 PLF	0 PLF	
10	Point	3-0-7		Top	171 lb	49 lb	0 lb	0 lb	F9 Header Column Header Column
	Self Weight				10 PLF				

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isDesign

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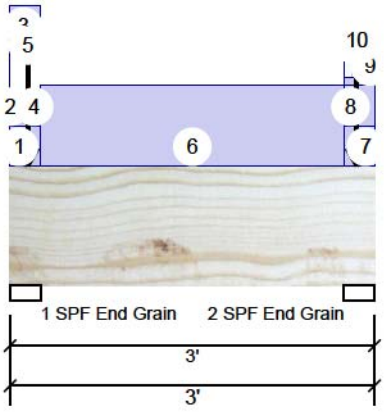
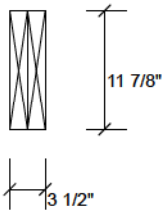
FH5-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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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	30	147	0	0
2	54	155	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	4%	184 / 46	230	L	1.25D+1.5L
2 - SPF End Grain	3.000"	5%	194 / 80	274	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	108 ft-lb	1'6"	22269 ft-lb	0.005 (0%)	1.4D	Uniform
Unbraced	108 ft-lb	1'6"	22269 ft-lb	0.005 (0%)	1.4D	Uniform
Shear	45 lb	1'2 1/8"	7537 lb	0.006 (1%)	1.4D	Uniform
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%)		

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.

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.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 0-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	8 PLF	22 PLF	0 PLF	0 PLF	
	End	0-3-0			8 PLF	22 PLF			
5	Point	0-1-12		Near Face	11 lb	25 lb			

Continued on page 2...

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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 preve ponding

This design is valid until 1/8/2023

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

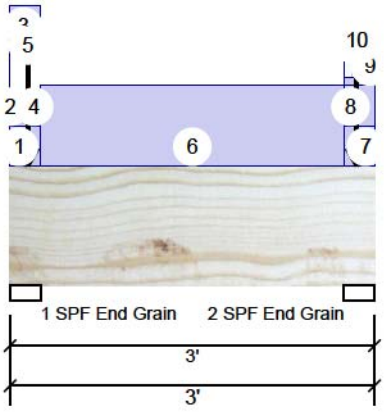
iStructDesign

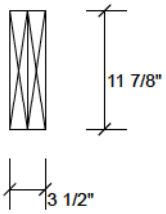
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

FH5-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	Part. Uniform	0-3-0 to 2-9-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	2-9-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	2-9-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	2-9-0		Near Face	8 PLF	22 PLF	0 PLF	0 PLF	
	End	3-0-0			8 PLF	22 PLF	0 PLF	0 PLF	
10	Point	2-10-4		Near Face	19 lb	48 lb	0 lb	0 lb	F9
	Self Weight				10 PLF				

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Notes

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5. Provide lateral support at bearing points to avoid lateral displacement and rotation
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This design is valid until 1/8/2023

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

Single 11-7/8" AJS® 140

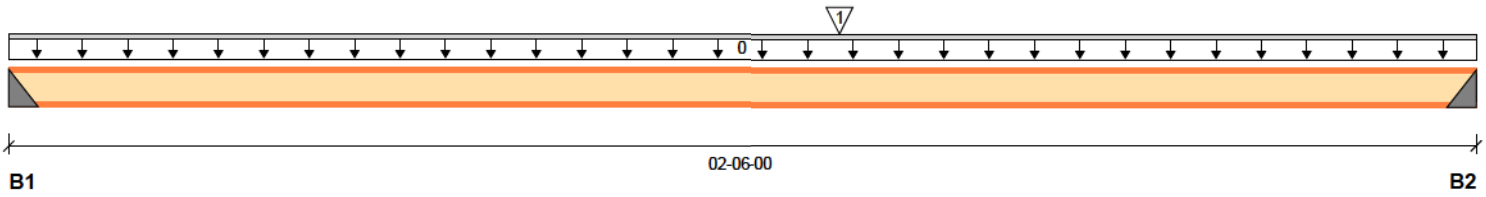
PASSED

F10-A

BC CALC® Member Report | Dry | 1 span | No cant. | December 17, 2020 13:25:25

Build 7364

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
Code reports:	CCMC 12787-R	Company:	GREENPARK



Total Horizontal Product Length = 02-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	134 / 0	54 / 0		
B2, 2"	179 / 0	71 / 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	02-06-00	Top		3			00-00-00
1	J7	Conc. Pt. (lbs)	L	01-05-00	01-05-00	Front	313	118			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	348 ft-lbs	5305 ft-lbs	6.6%	1	01-05-00
End Reaction	357 lbs	1607 lbs	22.2%	1	02-06-00
End Shear	357 lbs	2350 lbs	15.2%	1	02-04-00
Total Load Deflection	L/999 (0.004")	n\a	n\a	4	01-05-00
Live Load Deflection	L/999 (0.003")	n\a	n\a	5	01-05-00
Max Defl.	0.004"	n\a	n\a	4	01-05-00
Span / Depth	2.3				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger	2" x 2-1/2"	268 lbs	12.1%	16.6%	LF2511
B2	Hanger	2" x 2-1/2"	357 lbs	16.1%	22.2%	LF2511

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Cautions

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.
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

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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

Disclosure

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C®, BC FRAMER® , AJS™, T® , BC RIM BOARD™, BCI® , LULAM™, BC FloorValue® , LAM®, VERSA-RIM PLUS® ,

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

READ ALL NOTES ON THIS
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CALCULATION SUMMARY
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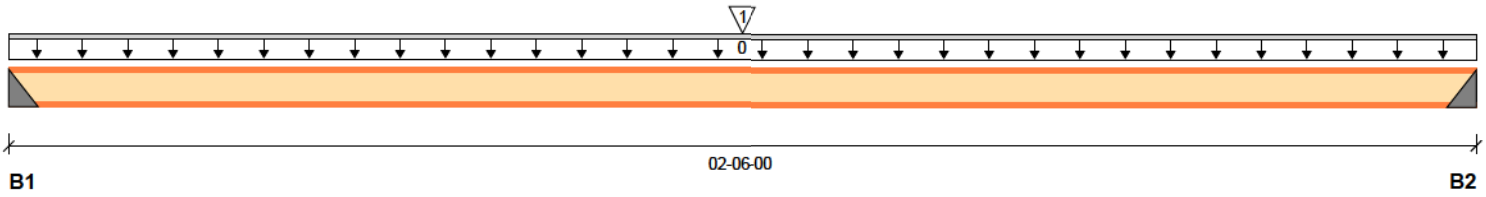
Single 11-7/8" AJS® 140

F10-B

BC CALC® Member Report
Build 7364
Dry | 1 span | No cant.
December 17, 2020 13:25:25

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
Code reports:	CCMC 12787-R	Company:	GREENPARK



Total Horizontal Product Length = 02-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	185 / 0	72 / 0		
B2, 2"	184 / 0	72 / 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	02-06-00	Top		3			00-00-00
1	J9	Conc. Pt. (lbs)	L	01-03-00	01-03-00	Back	369	138			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	418 ft-lbs	5305 ft-lbs	7.9%	1	01-03-00
End Reaction	367 lbs	1607 lbs	22.8%	1	00-00-00
End Shear	367 lbs	2350 lbs	15.6%	1	00-02-00
Total Load Deflection	L/999 (0.005")	n\a	n\a	4	01-03-00
Live Load Deflection	L/999 (0.003")	n\a	n\a	5	01-03-00
Max Defl.	0.005"	n\a	n\a	4	01-03-00
Span / Depth	2.3				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger	2" x 2-1/2"	367 lbs	16.6%	22.8%	LF2511
B2	Hanger	2" x 2-1/2"	367 lbs	16.6%	22.8%	LF2511

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Cautions

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Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist
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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.
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Importance Factor : Normal Part code : Part 9

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C®, BC FRAMER® , AJS™, T® , BC RIM BOARD™, BCI® , LULAM™, BC FloorValue® , LAM®, VERSA-RIM PLUS® ,

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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Single 11-7/8" AJS® 140

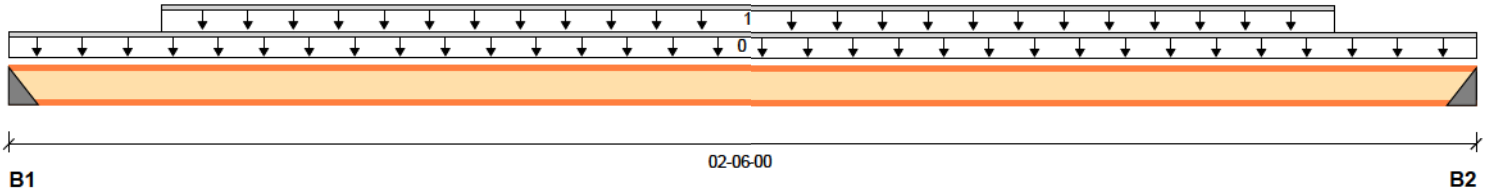
F10-C

Dry | 1 span | No cant.

BC CALC® Member Report
Build 7364

December 17, 2020 13:25:25

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
Code reports:	CCMC 12787-R	Company:	GREENPARK



Total Horizontal Product Length = 02-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	328 / 0	148 / 0		
B2, 2"	333 / 0	150 / 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	02-06-00	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-03-02	02-03-02	Back	330	146			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	440 ft-lbs	5305 ft-lbs	8.3%	1	01-03-00
End Reaction	687 lbs	1607 lbs	42.7%	1	02-06-00
End Shear	687 lbs	2350 lbs	29.2%	1	02-04-00
Total Load Deflection	L/999 (0.005")	n\a	n\a	4	01-03-00
Live Load Deflection	L/999 (0.004")	n\a	n\a	5	01-03-00
Max Defl.	0.005"	n\a	n\a	4	01-03-00
Span / Depth	2.3				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger	2" x 2-1/2"	677 lbs	23.5%	42.1%	LF2511
B2	Hanger	2" x 2-1/2"	687 lbs	23.9%	42.7%	LF2511

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Cautions

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Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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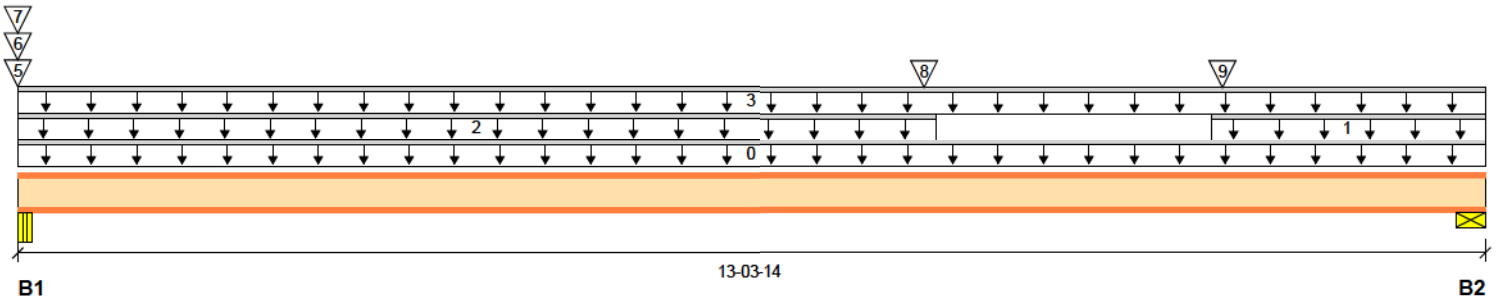
BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Total Horizontal Product Length = 13-03-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	315 / 0	139 / 0		
B2, 1-7/8"	310 / 0	135 / 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	13-03-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	10-10-00	13-03-14	Top	22	8			n\a
2		Unf. Lin. (lb/ft)	L	00-00-00	08-04-00	Top	22	8			n\a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-03-14	Top	22	8			n\a
5	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	7	3			n\a
6	J2	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	9	3			n\a
7	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		3			n\a
8	F9	Conc. Pt. (lbs)	L	08-02-12	08-02-12	Back	26	11			n\a
9	F9	Conc. Pt. (lbs)	L	10-11-04	10-11-04	Back	49	20			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1975 ft-lbs	5305 ft-lbs	37.2%	1	06-08-05
End Reaction	634 lbs	1582 lbs	40.1%	1	13-03-14
End Shear	620 lbs	2350 lbs	26.4%	1	13-02-00
Total Load Deflection	L/1000 (0.157")	n\a	24.0%	4	06-08-05
Live Load Deflection	L/999 (0.109")	n\a	n\a	5	06-08-05
Max Defl.	0.157"	n\a	15.7%	4	06-08-05
Span / Depth	13.2				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Beam	2-5/8" x 2-1/2"	646 lbs	0.2%	37.2%	Steel
B2	Wall/Plate	1-7/8" x 2-1/2"	634 lbs	22.0%	40.1%	Spruce-Pine-Fir

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Town of East Gwillimbury
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Building Code	H. Authier	43236	2021-02-05
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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BC CALC® Member Report | Dry | 1 span | No cant. | December 17, 2020 13:25:26
Build 7364

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
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

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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Single 11-7/8" AJS® 140

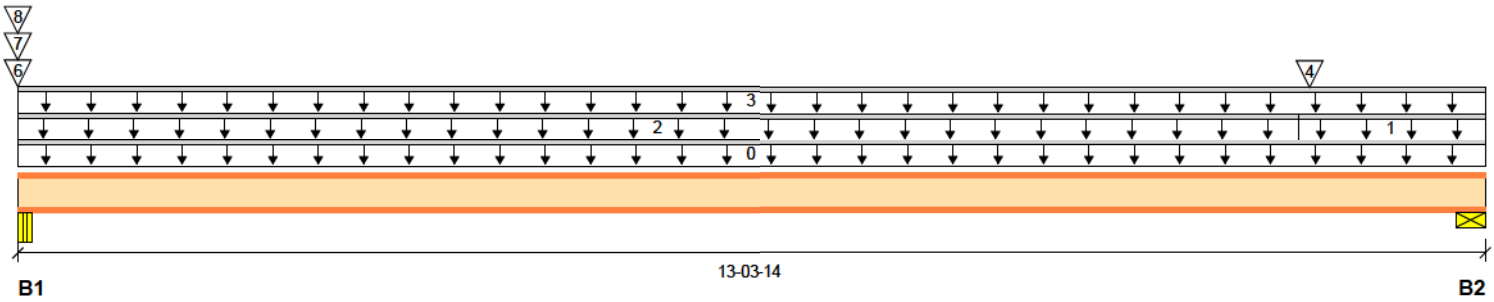
F11-B

BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Total Horizontal Product Length = 13-03-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	488 / 0	224 / 0		
B2, 1-7/8"	561 / 0	230 / 0		

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.

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	13-03-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	11-07-08	13-03-14	Top	54	20			n\a
2		Unf. Lin. (lb/ft)	L	00-00-00	11-07-08	Top	24	9			n\a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-03-14	Top	30	11			n\a
4	F10	Conc. Pt. (lbs)	L	11-08-12	11-08-12	Back	179	71			n\a
6	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	78	29			n\a
7	J4	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	30	11			n\a
8	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		24			

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	2626 ft-lbs	5305 ft-lbs	49.5%	1	07-00-13
End Reaction	1129 lbs	1582 lbs	71.4%	1	13-03-14
End Shear	1103 lbs	2350 lbs	46.9%	1	13-02-00
Total Load Deflection	L/742 (0.211")	n\a	32.3%	4	06-10-14
Live Load Deflection	L/1053 (0.149")	n\a	34.2%	5	06-10-14
Max Defl.	0.211"	n\a	21.1%	4	06-10-14
Span / Depth	13.2				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Beam	2-5/8" x 2-1/2"	1013 lbs	0.4%	58.3%	Steel
B2	Wall/Plate	1-7/8" x 2-1/2"	1129 lbs	39.1%	71.4%	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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

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Town of East Gwillimbury
Building Standards Branch BCIN #16487

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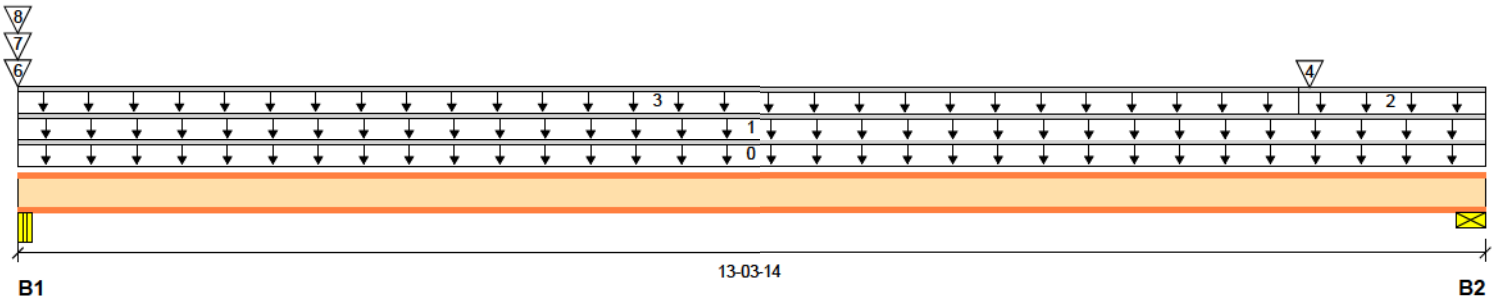
Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Total Horizontal Product Length = 13-03-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	406 / 0	171 / 0		
B2, 1-7/8"	535 / 0	221 / 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	13-03-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	13-03-14	Top	27	10			n\a
2		Unf. Lin. (lb/ft)	L	11-07-08	13-03-14	Top	54	20			n\a
3		Unf. Lin. (lb/ft)	L	00-00-00	11-07-08	Top	30	11			n\a
4	F10	Conc. Pt. (lbs)	L	11-08-12	11-08-12	Front	134	54			n\a
6	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	4	2			n\a
7	J4	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	2	1			n\a
8	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		1			

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	2705 ft-lbs	5305 ft-lbs	51.0%	1	06-11-13
End Reaction	1078 lbs	1582 lbs	68.2%	1	13-03-14
End Shear	1053 lbs	2350 lbs	44.8%	1	13-02-00
Total Load Deflection	L/723 (0.217")	n\a	33.2%	4	06-08-14
Live Load Deflection	L/1025 (0.153")	n\a	35.1%	5	06-08-14
Max Defl.	0.217"	n\a	21.7%	4	06-08-14
Span / Depth	13.2				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Beam	2-5/8" x 2-1/2"	822 lbs	0.3%	47.4%	Steel
B2	Wall/Plate	1-7/8" x 2-1/2"	1078 lbs	37.4%	68.2%	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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

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Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Single 11-7/8" AJS® 140

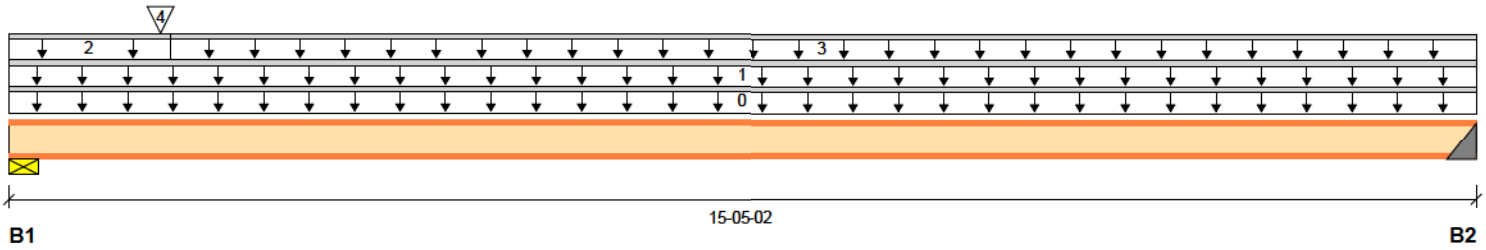
PASSED

F13-A

BC CALC® Member Report | Dry | 1 span | No cant. | December 17, 2020 13:25:26

Build 7364

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
Code reports:	CCMC 12787-R	Company:	GREENPARK



Total Horizontal Product Length = 15-05-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	622 / 0	255 / 0		
B2, 2"	432 / 0	182 / 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	15-05-02	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	15-05-02	Top	26	10			n\a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n\a
3		Unf. Lin. (lb/ft)	L	01-08-06	15-05-02	Top	27	10			n\a
4	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Front	185	72			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	3452 ft-lbs	5305 ft-lbs	65.1%	1	07-04-12
End Reaction	1251 lbs	1582 lbs	79.1%	1	00-00-00
End Shear	1226 lbs	2350 lbs	52.2%	1	00-01-14
Total Load Deflection	L/502 (0.364")	n\a	47.8%	4	07-07-02
Live Load Deflection	L/712 (0.257")	n\a	50.5%	5	07-07-02
Max Defl.	0.364"	n\a	36.4%	4	07-07-02
Span / Depth	15.4				

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PROVINCE OF ONTARIO
Dec 19, 2020

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 2-1/2"	1251 lbs	43.4%	79.1%	Spruce-Pine-Fir
B2	Hanger	2" x 2-1/2"	875 lbs	39.5%	54.4%	LF2511

Cautions

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.
Header for the hanger LF2511 is a Single 1-3/4" x 11-7/8" LVL beam

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Sewage System			
Zoning			

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BC CALC® Member Report
Build 7364
December 17, 2020 13:25:26

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
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.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
Resistance Factor phi has been applied to all presented results per CSA O86.
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Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

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Sewage System			
Zoning			

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Single 11-7/8" AJS® 140

F13-B

BC CALC® Member Report | Dry | 1 span | No cant. | December 17, 2020 13:25:26

Build 7364

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
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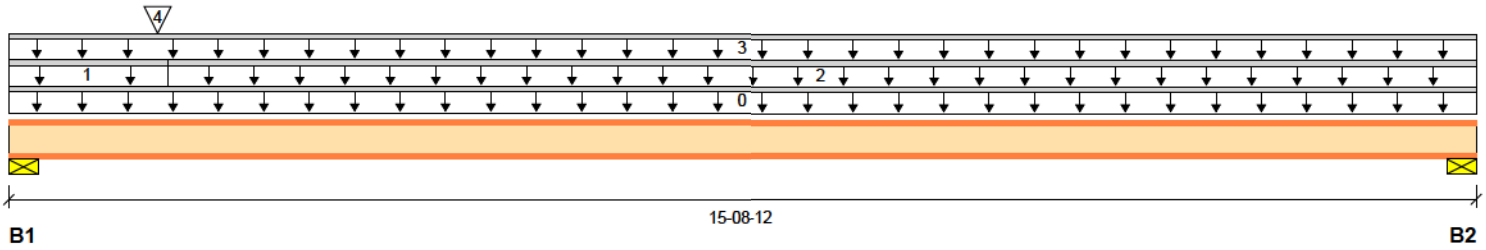
Code reports:	CCMC 12787-R	Company:	GREENPARK



Total Horizontal Product Length = 15-08-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	618 / 0	253 / 0		
B2, 6-7/8"	451 / 0	190 / 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	15-08-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n\a
2		Unf. Lin. (lb/ft)	L	01-08-06	15-08-12	Top	27	10			n\a
3		Unf. Lin. (lb/ft)	L	00-00-00	15-08-12	Top	26	10			n\a
4	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Back	184	72			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	3408 ft-lbs	5305 ft-lbs	64.2%	1	07-04-03
End Reaction	1243 lbs	1582 lbs	78.6%	1	00-00-00
End Shear	1218 lbs	2350 lbs	51.8%	1	00-01-14
Total Load Deflection	L/512 (0.355")	n\a	46.9%	4	07-06-08
Live Load Deflection	L/726 (0.25")	n\a	49.6%	5	07-06-08
Max Defl.	0.355"	n\a	35.5%	4	07-06-08
Span / Depth	15.3				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 2-1/2"	1243 lbs	43.1%	78.6%	Spruce-Pine-Fir
B2	Wall/Plate	6-7/8" x 2-1/2"	914 lbs	8.6%	47.7%	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.
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Resistance Factor phi has been applied to all presented results per CSA O86.
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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

PASSED

Single 11-7/8" AJS® 24

F15-A

Dry | 1 span | No cant.

BC CALC® Member Report
Build 7364

December 17, 2020 13:25:26

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
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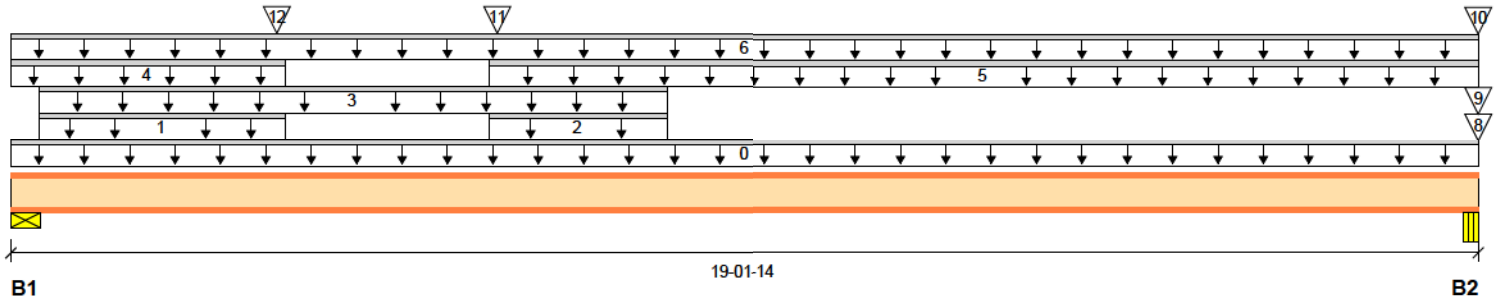

Total Horizontal Product Length = 19-01-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	392 / 0	208 / 0		
B2, 2-5/8"	503 / 0	256 / 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	19-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	03-06-14	Top		2			n\a
2		Unf. Lin. (lb/ft)	L	06-02-14	08-06-11	Top		2			n\a
3		Unf. Lin. (lb/ft)	L	00-04-06	08-06-12	Top		2			n\a
4		Unf. Lin. (lb/ft)	L	00-00-00	03-06-14	Top	19	7			n\a
5		Unf. Lin. (lb/ft)	L	06-02-14	19-01-14	Top	19	7			n\a
6		Unf. Lin. (lb/ft)	L	00-00-00	19-01-14	Top	20	8			n\a
8	J8	Conc. Pt. (lbs)	L	19-01-14	19-01-14	Top	51	23			n\a
9	J2	Conc. Pt. (lbs)	L	19-01-14	19-01-14	Top	72	27			n\a
10	Wall Self Weight	Conc. Pt. (lbs)	L	19-01-14	19-01-14	Top		22			n\a
11	F9	Conc. Pt. (lbs)	L	06-04-02	06-04-02	Back	22	12			n\a
12	F9	Conc. Pt. (lbs)	L	03-05-10	03-05-10	Back	50	25			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	3803 ft-lbs	8640 ft-lbs	44.0%	1	09-05-05
End Reaction	1075 lbs	1736 lbs	61.9%	1	19-01-14
End Shear	836 lbs	2350 lbs	35.6%	1	00-01-14
Total Load Deflection	L/545 (0.417")	n\a	44.1%	4	09-05-05
Live Load Deflection	L/821 (0.276")	n\a	43.8%	5	09-05-05
Max Defl.	0.417"	n\a	41.7%	4	09-05-05
Span / Depth	19.1				

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N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Mat
B1	Wall/Plate	1-7/8" x 3-1/2"	849 lbs	21.0%	53.7%	Spr
B2	Beam	2-5/8" x 3-1/2"	1075 lbs	0.3%	61.9%	Ste

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
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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Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
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

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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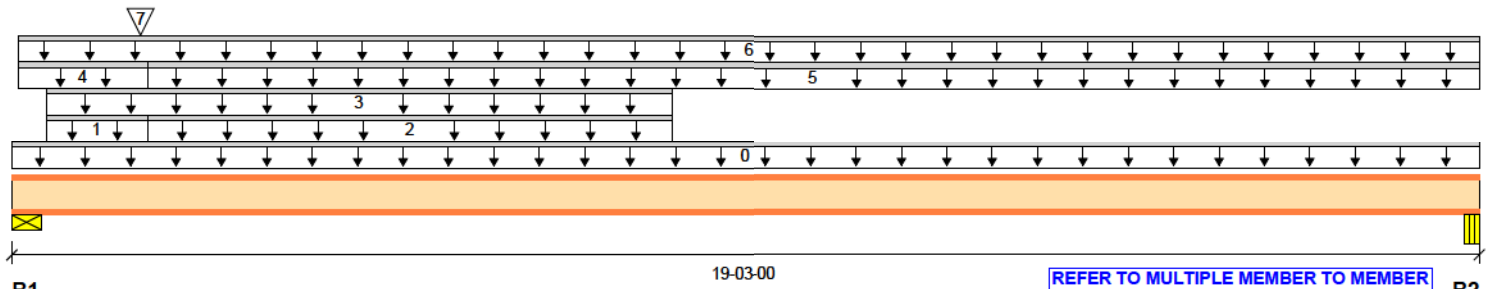
BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Total Horizontal Product Length = 19-03-00

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.

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3"	751 / 0	375 / 0		
B2, 2-5/8"	413 / 0	199 / 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	19-03-00	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-05-08	01-09-08	Top		7			n\a
2		Unf. Lin. (lb/ft)	L	01-09-08	08-07-15	Top		2			n\a
3		Unf. Lin. (lb/ft)	L	00-05-08	08-07-15	Top		3			n\a
4		Unf. Lin. (lb/ft)	L	00-01-02	01-09-08	Top	56	21			n\a
5		Unf. Lin. (lb/ft)	L	01-09-08	19-03-00	Top	18	7			n\a
6		Unf. Lin. (lb/ft)	L	00-01-02	19-03-00	Top	22	8			n\a
7	F10	Conc. Pt. (lbs)	L	01-08-04	01-08-04	Back	333	150			

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	4419 ft-lbs	8640 ft-lbs	51.1%	1	08-09-11
End Reaction	1595 lbs	1813 lbs	88.0%	1	00-00-00
End Shear	1570 lbs	2350 lbs	66.8%	1	00-03-00
Total Load Deflection	L/462 (0.491")	n\a	51.9%	4	09-03-00
Live Load Deflection	L/695 (0.326")	n\a	51.8%	5	09-06-08
Max Defl.	0.491"	n\a	49.1%	4	09-03-00
Span / Depth	19.1				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3" x 3-1/2"	1595 lbs	24.7%	88.0%	Spruce-Pine-Fir
B2	Beam	2-5/8" x 3-1/2"	869 lbs	0.2%	50.1%	Steel

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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

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Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

PASSED

Single 11-7/8" AJS® 24

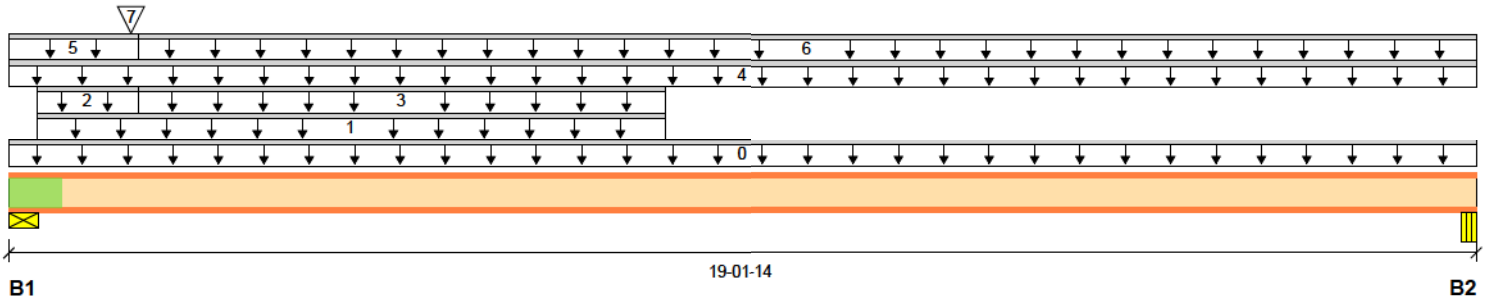
F15-C

Dry | 1 span | No cant.

BC CALC® Member Report
Build 7364

December 17, 2020 13:25:26

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
Code reports:	CCMC 12787-R	Company:	GREENPARK



Total Horizontal Product Length = 19-01-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	745 / 0	373 / 0		
B2, 2-5/8"	413 / 0	199 / 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	19-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	08-06-12	Top		3			n\a
2		Unf. Lin. (lb/ft)	L	00-04-06	01-08-06	Top		7			n\a
3		Unf. Lin. (lb/ft)	L	01-08-06	08-06-12	Top		2			n\a
4		Unf. Lin. (lb/ft)	L	00-00-00	19-01-14	Top	22	8			n\a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	56	21			n\a
6		Unf. Lin. (lb/ft)	L	01-08-06	19-01-14	Top	18	7			n\a
7	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Front	328	148			

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	4409 ft-lbs	8640 ft-lbs	51.0%	1	08-06-13
End Reaction	1584 lbs	2182 lbs	72.6%	1	00-00-00
End Shear	1560 lbs	2350 lbs	66.4%	1	00-01-14
Total Load Deflection	L/463 (0.49")	n\a	51.8%	4	09-01-13
Live Load Deflection	L/697 (0.326")	n\a	51.7%	5	09-05-06
Max Defl.	0.49"	n\a	49.0%	4	09-01-13
Span / Depth	19.1				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 3-1/2"	1584 lbs	39.2%	72.6%	Spruce-Pine-Fir
B2	Beam	2-5/8" x 3-1/2"	869 lbs	0.2%	50.0%	Steel

Cautions

Web stiffeners required at bearing B1.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Town of East Gwillimbury
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Sewage System			
Zoning			

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

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BC CALC® Member Report
Build 7364
December 17, 2020 13:25:26

Job name:		File name:	S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Address:		Description:	Level - Ground Floor
City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
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

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Job name:
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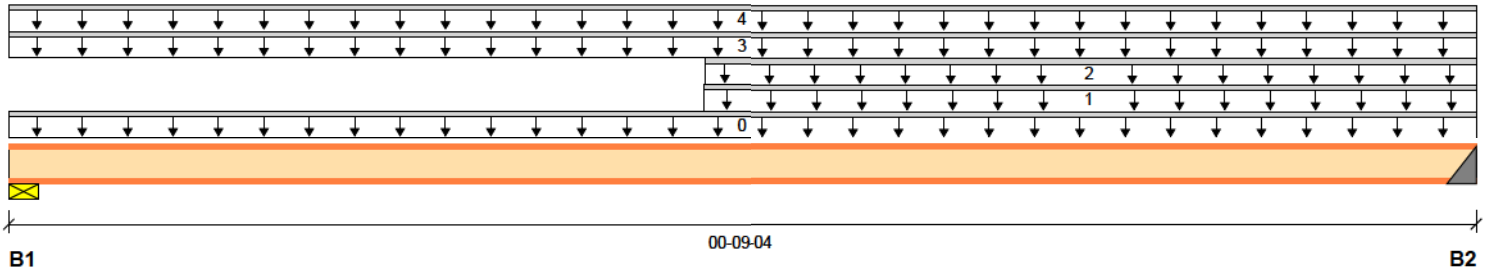

Total Horizontal Product Length = 00-09-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	49 / 0	20 / 0		
B2, 2"	50 / 0	25 / 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	00-09-04	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	00-09-04	Top		7			n\a
2		Unf. Lin. (lb/ft)	L	00-04-06	00-09-04	Top		9			n\a
3		Unf. Lin. (lb/ft)	L	00-00-00	00-09-04	Top	58	22			n\a
4		Unf. Lin. (lb/ft)	L	00-00-00	00-09-04	Top	70	26			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	11 ft-lbs	5305 ft-lbs	0.2%	1	00-04-10
End Reaction	106 lbs	1607 lbs	6.6%	1	00-09-04
End Shear	60 lbs	2350 lbs	2.6%	1	00-07-04
Total Load Deflection	L/999 (0")	n\a	n\a	4	00-04-10
Live Load Deflection	L/999 (0")	n\a	n\a	5	00-04-09
Max Defl.	0"	n\a	n\a	4	00-04-10
Span / Depth	0.6				

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N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 2-1/2"	98 lbs	3.4%	6.2%	Spruce-Pine-Fir
B2	Hanger	2" x 2-1/2"	106 lbs	3.7%	6.6%	LF2511

Cautions

Hanger LF2511 requires (12) 10d face nails, (1) #8x1.25 joist nails.
Header for the hanger LF2511 is a Single 3-1/2" x 11-7/8" I-joist

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Building Standards Branch BCIN #16487

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Build 7364
December 17, 2020 13:25:26

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City, Province, Postal Code:		Specifier:	
Customer:		Designer:	R O
Code reports:	CCMC 12787-R	Company:	GREENPARK

Notes

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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.
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Job name:
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Dry | 1 span | No cant.

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
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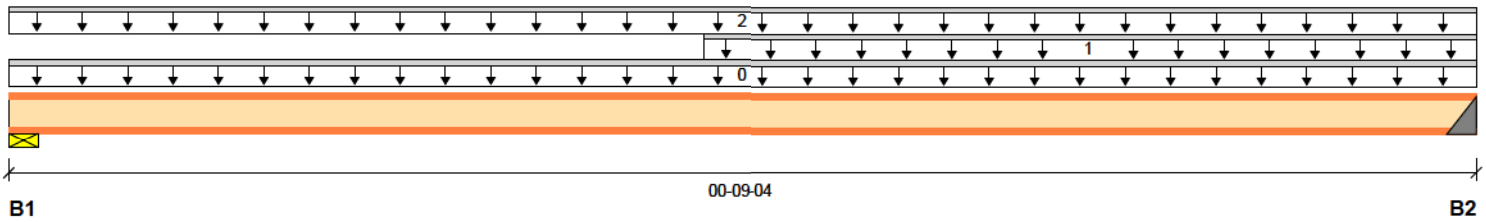

Total Horizontal Product Length = 00-09-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	22 / 0	10 / 0		
B2, 2"	22 / 0	12 / 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	00-09-04	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	00-09-04	Top		7			n\a
2		Unf. Lin. (lb/ft)	L	00-00-00	00-09-04	Top	58	22			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	5 ft-lbs	5305 ft-lbs	n\a	1	00-04-10
End Reaction	48 lbs	1607 lbs	3.0%	1	00-09-04
End Shear	27 lbs	2350 lbs	1.2%	1	00-07-04
Total Load Deflection	L/999 (0")	n\a	n\a	4	00-04-10
Max Defl.	0"	n\a	n\a	4	00-04-10
Span / Depth	0.6				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 2-1/2"	45 lbs	1.6%	2.8%	Spruce-Pine-Fir
B2	Hanger	2" x 2-1/2"	48 lbs	1.7%	3.0%	LF2511

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Cautions

Hanger LF2511 requires (12) 10d face nails, (1) #8x1.25 joist nails.
Header for the hanger LF2511 is a Single 3-1/2" x 11-7/8" I-joist

Notes

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Hanger Manufacturer: Simpson Strong-Tie, Inc.
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Building Standards Branch BCIN #16487

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Sewage System			
Zoning			

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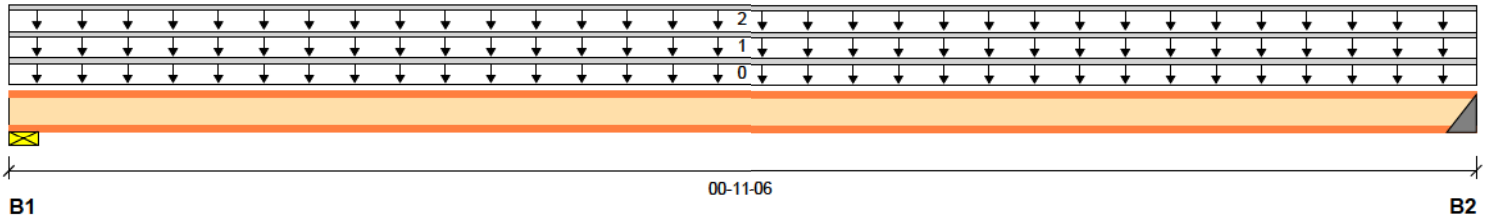
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Total Horizontal Product Length = 00-11-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	48 / 0	19 / 0		
B2, 2"	49 / 0	20 / 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	00-11-06	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	Top	49	18			n\a
2		Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	Top	54	20			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	14 ft-lbs	5305 ft-lbs	0.3%	1	00-05-10
End Reaction	98 lbs	1607 lbs	6.1%	1	00-11-06
End Shear	64 lbs	2350 lbs	2.7%	1	00-01-14
Total Load Deflection	L/999 (0")	n\a	n\a	4	00-05-10
Live Load Deflection	L/999 (0")	n\a	n\a	5	00-05-10
Max Defl.	0"	n\a	n\a	4	00-05-10
Span / Depth	0.8				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 2-1/2"	96 lbs	3.3%	6.1%	Spruce-Pine-Fir
B2	Hanger	2" x 2-1/2"	98 lbs	4.4%	6.1%	LF2511

Cautions

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on code-accepted design s and analysis methods. on of Boise Cascade ed wood products must be in nce with current Installation d applicable building codes. To stallation Guide or ask s, please call (800)232-0788 stallation.

C®, BC FRAMER® , AJS™, ST® , BC RIM BOARD™, BCI® , GLULAM™, BC FloorValue® , LAM®, VERSA-RIM PLUS® ,

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

READ ALL NOTES ON THIS
ENGINEERING NOTE PAGE
NOTE PAGE IS AN INTEGR.
CALCULATION SUMMARY
CONTAINS SPECIFICATIONS AND CRITERIA
USED IN THE DESIGN OF THIS COMPONENT.

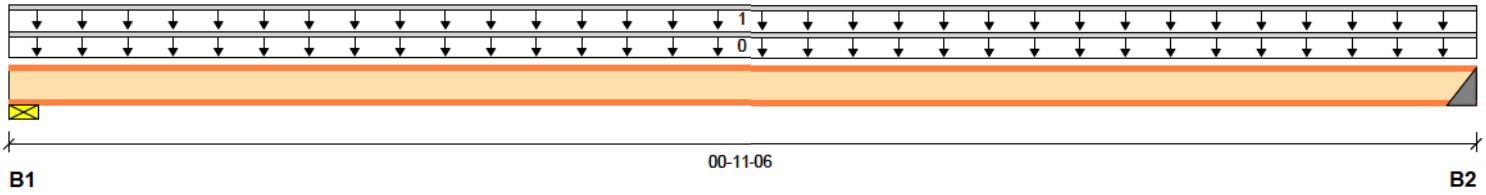
REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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

BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

December 17, 2020 13:25:26

File name: S:\CUSTOMERS\GREENPA...-ELEV. 3-DECK-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Total Horizontal Product Length = 00-11-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	25 / 0	11 / 0		
B2, 2"	26 / 0	11 / 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	00-11-06	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	Top	54	20			n\a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	8 ft-lbs	5305 ft-lbs	0.1%	1	00-05-10
End Reaction	53 lbs	1607 lbs	3.3%	1	00-11-06
End Shear	34 lbs	2350 lbs	1.5%	1	00-01-14
Total Load Deflection	L/999 (0")	n\a	n\a	4	00-05-10
Live Load Deflection	L/999 (0")	n\a	n\a	5	00-05-10
Max Defl.	0"	n\a	n\a	4	00-05-10
Span / Depth	0.8				

Bearing Supports

		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 2-1/2"	51 lbs	1.8%	3.2%	Spruce-Pine-Fir
B2	Hanger	2" x 2-1/2"	53 lbs	2.4%	3.3%	LF2511

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Cautions

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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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

Disclosure

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Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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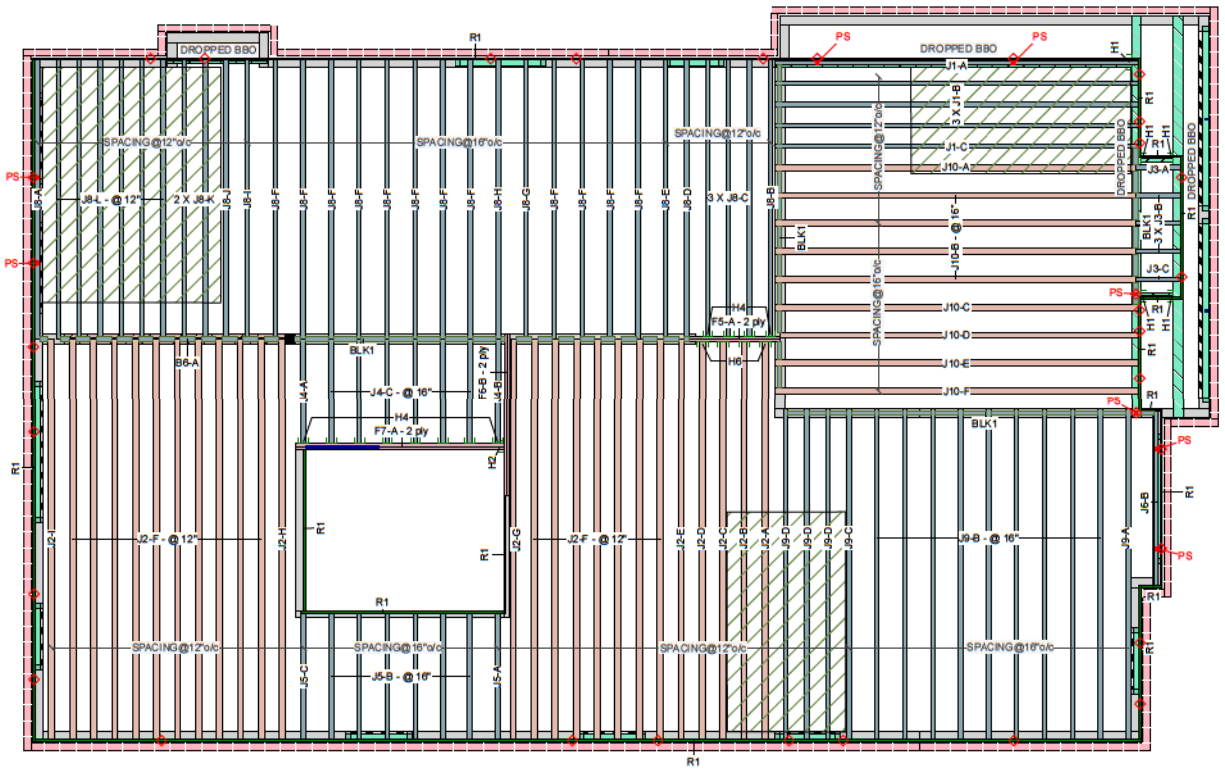
PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Second Floor



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

Version 20.20.002 Powered by iStruct™

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

Second Floor

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F7	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	6-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
B6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	12-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J1	AJS 140	2.5	11.875			5	18-0-0
J9	AJS 140	2.5	11.875			14	16-0-0
J8	AJS 140	2.5	11.875			31	14-0-0
J6	AJS 140	2.5	11.875			1	10-0-0
J5	AJS 140	2.5	11.875			8	8-0-0
J4	AJS 140	2.5	11.875			8	6-0-0
J3	AJS 140	2.5	11.875			5	4-0-0
J2	AJS 24	3.5	11.875			25	20-0-0
J10	AJS 24	3.5	11.875			9	18-0-0

Rim Board

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

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt		Varies	56-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	5	Unknown Hanger				
H2	1	HGUS4 10			46 16d	16 16d
H4	12	LF2511			12 10d	1 #8x1 1/4WS
H6	4	LF3511			12 10d	2 #8x1 1/4WS

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

JOB INFORMATION

Builder
GREENPARK

Project

Shipping

Sales Rep

Designer
R O

Plotted
December 17, 2020

Layout Name
GLENWAY 7A-ELEV. 3-DECK-R1

Job Path
S:\CUSTOMERS\GREENPARK\TRINA R HALL \MODELS\GLENWAY 7A\ELEV 3\FLOORS\R1\DECK COND\GLENWAY 7A-ELEV. 3-DECK-R1.jsl

DESIGN CRITERIA

Second Floor

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

Floor

Loads

Live	40
Dead	15

Deflection Joist

LL Span L/	480
TL Span L/	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/	240

Decking

Decking	OSB
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
K2H7V1

KOTT

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Legend

PS	Point Load Support
◇	Load from Above

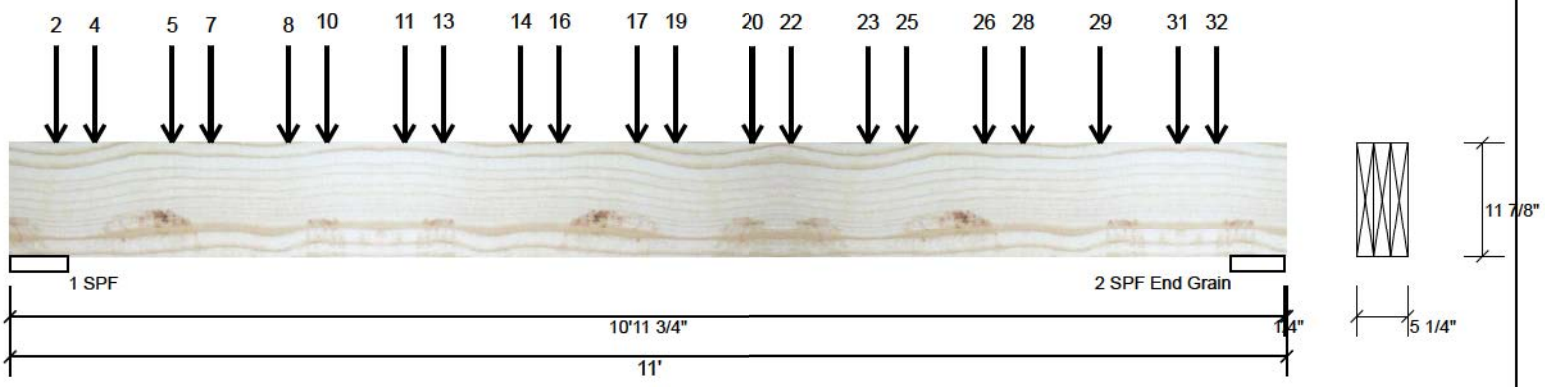
iStructDesign

Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

B6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
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	3399	1454	0	0
2	3368	1391	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	36%	1817 / 5098	6915	L_	1.25D+1.5L
2 - SPF End Grain	5.500"	32%	1739 / 5052	6792	L_	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17454 ft-lb	5'4 3/4"	53447 ft-lb	0.327 (33%)	1.25D+1.5L	L_
Unbraced	17454 ft-lb	5'4 3/4"	51798 ft-lb	0.337 (34%)	1.25D+1.5L	L_
Shear	6114 lb	1'5 1/8"	17394 lb	0.351 (35%)	1.25D+1.5L	L_
Perm Defl in.	0.054 (L/2288)	5'7"	0.344 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.128 (L/965)	5'7 1/8"	0.344 (L/360)	0.370 (37%)	L	LL
TL Defl inch	0.182 (L/679)	5'7 1/8"	0.516 (L/240)	0.350 (35%)	D+L	LL
LL Cant	-0.001 (2L/687)	Rt Cant	0.200 (2L/480)	0.004 (0%)	L	LL
TL Cant	-0.001 (2L/484)	Rt Cant	0.300 (2L/360)	0.003 (0%)	D+L	LL

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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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

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 preve ponding

This design is valid until 1/8/2023

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

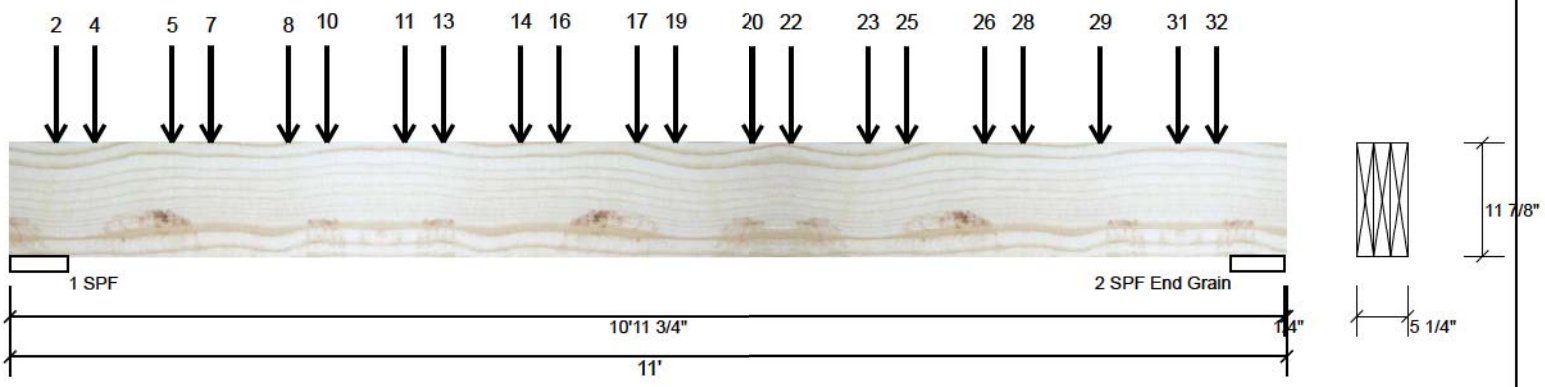
iStructDesign

Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

B6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
2	Point	0-4-12		Top	70 lb	186 lb	0 lb	0 lb	J2
4	Point	0-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
5	Point	1-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
7	Point	1-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
8	Point	2-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
10	Point	2-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
11	Point	3-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
13	Point	3-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
14	Point	4-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
16	Point	4-8-12		Top	119 lb	264 lb	0 lb	0 lb	J8
17	Point	5-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
19	Point	5-8-12		Top	120 lb	267 lb	0 lb	0 lb	J8
20	Point	6-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
22	Point	6-8-12		Top	120 lb	267 lb	0 lb	0 lb	J8
23	Point	7-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
25	Point	7-8-12		Top	105 lb	267 lb	0 lb	0 lb	J8
26	Point	8-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
28	Point	8-8-12		Top	117 lb	311 lb	0 lb	0 lb	J8
29	Point	9-4-12		Top	143 lb	380 lb	0 lb	0 lb	J2
31	Point	10-0-12		Top	132 lb	351 lb	0 lb	0 lb	J8
32	Point	10-4-12		Top	142 lb	378 lb	0 lb	0 lb	J2
	Self Weight				14 PLF				

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Zoning			

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

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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
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Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

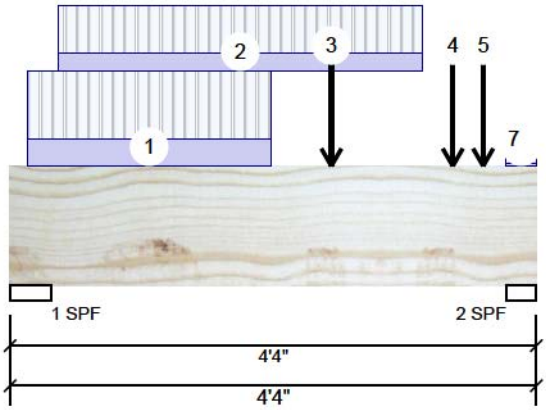
isDesign

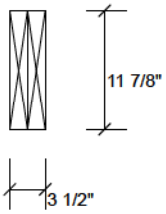
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F5-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	1235	494	0	0
2	1187	484	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	29%	618 / 1853	2470	L	1.25D+1.5L
2 - SPF	3.000"	37%	605 / 1781	2386	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2341 ft-lb	2'3 1/8"	34261 ft-lb	0.068 (7%)	1.25D+1.5L	L
Unbraced	2341 ft-lb	2'3 1/8"	34261 ft-lb	0.068 (7%)	1.25D+1.5L	L
Shear	3403 lb	3'1 7/8"	11596 lb	0.293 (29%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/17823)	2'2 13/16"	0.129 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/7169)	2'2 11/16"	0.129 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.009 (L/5113)	2'2 11/16"	0.194 (L/240)	0.050 (5%)	D+L	L

Design Notes

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

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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.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-1-12 to 2-1-12		Near Face	144 PLF	376 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-4-12 to 3-4-12		Far Face	97 PLF	260 PLF	0 PLF	0 PLF	
3	Point	2-7-12		Near Face	153 lb	376 lb	0 lb	0 lb	J2
4	Point	3-7-12		Near Face	141 lb	343 lb			
5	Point	3-10-12		Far Face	59 lb	158 lb			
6	Tie-In	4-1-0 to 4-4-0	0-9-2	Top	15 PSF	40 PSF			

Continued on page 2...

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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 preve ponding

This design is valid until 1/8/2023

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

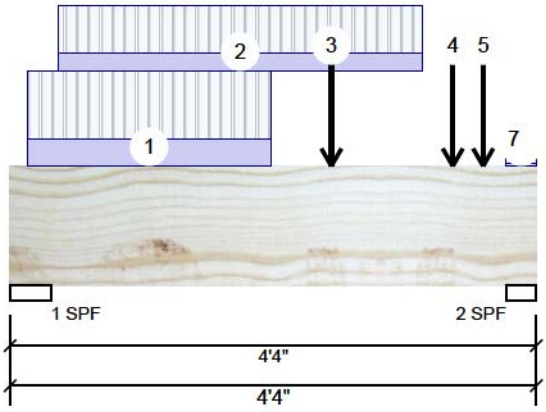
iStructDesign

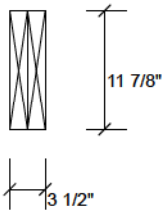
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	4-1-0 to 4-4-0	0-6-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	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
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Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

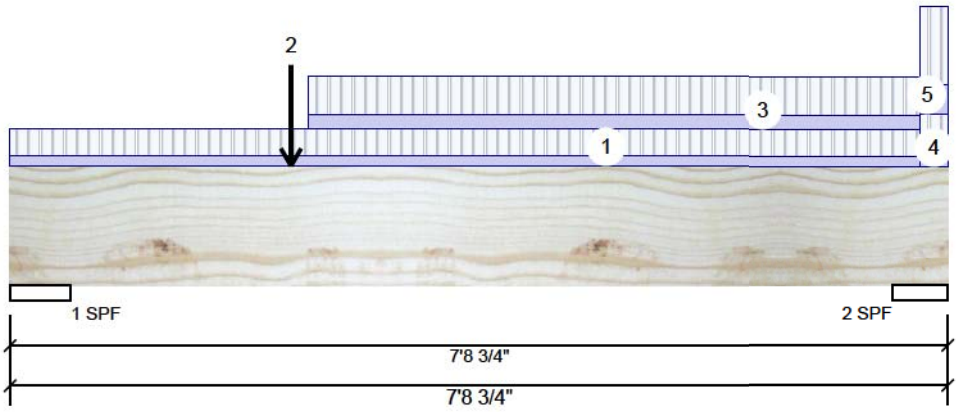
iStructDesign

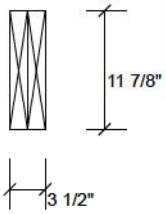
Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F6-B 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	527	268	0	0
2	240	139	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	9%	335 / 791	1126	L	1.25D+1.5L
2 - SPF	5.500"	5%	174 / 360	534	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2048 ft-lb	2'3 3/4"	34261 ft-lb	0.060 (6%)	1.25D+1.5L	L
Unbraced	2048 ft-lb	2'3 3/4"	32048 ft-lb	0.064 (6%)	1.25D+1.5L	L
Shear	1091 lb	1'5 1/8"	11596 lb	0.094 (9%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/18271)	3'3 3/4"	0.230 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.009 (L/9264)	3'2 9/16"	0.230 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.013 (L/6148)	3'2 15/16"	0.345 (L/240)	0.040 (4%)	D+L	L

Design Notes

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

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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.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 7-6-0	0-1-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	2-3-12		Far Face	297 lb	670 lb	0 lb	0 lb	F7
3	Tie-In	2-5-8 to 7-6-0	0-2-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	7-6-0 to 7-8-12	0-2-10	Top	15 PSF	40 PSF			
5	Tie-In	7-6-0 to 7-8-12	0-5-6	Top	15 PSF	40 PSF			
	Self Weight				10 PLF				

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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 preve ponding

This design is valid until 1/8/2023

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14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

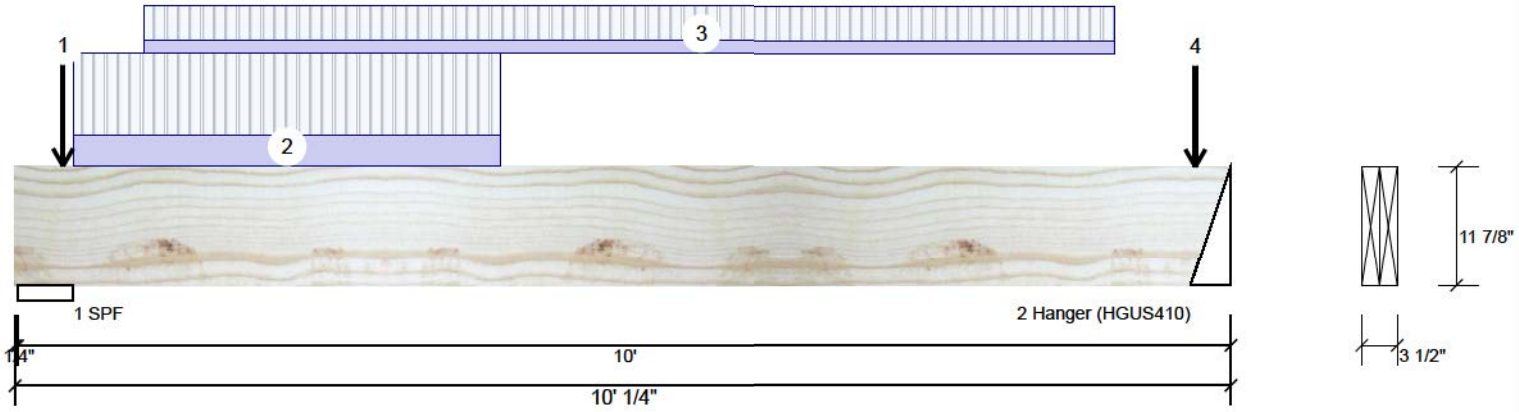
iStructDesign

Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

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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	1179	488	0	0
2	670	297	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	20%	610 / 1768	2379	_L	1.25D+1.5L
2 - Hanger	4.000"	13%	371 / 1005	1377	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4204 ft-lb	3'9 9/16"	34261 ft-lb	0.123 (12%)	1.25D+1.5L	_L
Unbraced	4204 ft-lb	3'9 9/16"	30062 ft-lb	0.140 (14%)	1.25D+1.5L	_L
Shear	1800 lb	1'2 7/8"	11596 lb	0.155 (16%)	1.25D+1.5L	_L
Perm Defl in.	0.017 (L/6898)	4'8 7/16"	0.317 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.039 (L/2936)	4'7 7/8"	0.317 (L/360)	0.120 (12%)	L	LL
TL Defl inch	0.055 (L/2060)	4'8 1/16"	0.475 (L/240)	0.120 (12%)	D+L	LL
LL Cant	-0.000 (2L/1977)	Lt Cant	0.200 (2L/480)	0.001 (0%)	L	LL
TL Cant	-0.000 (2L/1390)	Lt Cant	0.300 (2L/240)	0.001 (0%)	D+L	LL

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Dec 19, 2020

Design Notes

1 Fill all hanger nailing holes.
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	Comments
1	Point	0-4-12		Far Face	44 lb	116 lb			
2	Part. Uniform	0-5-12 to 4-0-0		Top	90 PLF	240 PLF			
3	Part. Uniform	1-0-12 to 9-0-12		Far Face	37 PLF	100 PLF			

Continued on page 2...

Town of East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-05
Sewage System			
Zoning			

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
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K2H7V1
905-642-4400

KOTT

CSD DRAW DESIGN BUILD

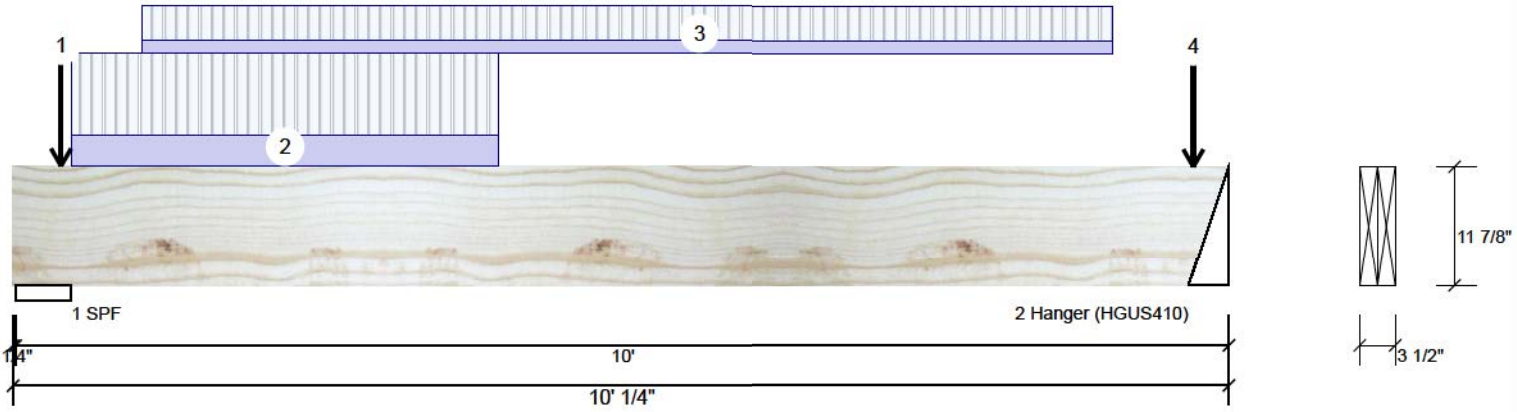
iStructDesign

Client: GREENPARK
Project:
Address:

Date: 12/17/2020
Input by: R O
Job Name: GLENWAY 7A-ELEV. 3-DECK-R1
Project #:

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	9-8-12		Far Face	33 lb	88 lb	0 lb	0 lb	J4
	Self Weight				10 PLF				

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Lumber

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

Handling & Installation

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Zoning			

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