

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN, ON L4K 3P3
Project # 17-55
Model: LOT-12 CELESTIAL 1
EL-1
Date: AUG 30 2018

JOISTS SPACING 16" O/C
UNLESS
NOTED OTHERWISE

- OBC 2012 O.Reg 332/12 as amended
- Nascor CCMC - 13535-R
- LVL CCMC - 12904-R
- CAN/CSA-O86-09
- CCMC - 12787-R APA PR-L310(C)

Engineered floor joists shall be installed
in accordance with the supplier's layout and
specifications forming part of the permit drawings.

This certification is to confirm that:

- The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
- The floor joists comply with the KOTT span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the KOTT Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail.

All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



January 04, 2019

Ground Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	10-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			1	10-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F14	LPI 20Plus	2.5	11.875			4	18-0-0
F13	LPI 20Plus	2.5	11.875			2	4-0-0
J7	LPI 20Plus	2.5	11.875			4	16-0-0
J5	LPI 20Plus	2.5	11.875			10	14-0-0
J12	LPI 20Plus	2.5	11.875			4	10-0-0
J11	LPI 20Plus	2.5	11.875			9	4-0-0
J10	NJ60H	2.5	11.875			12	18-0-0
J6	NJ60H	2.5	11.875			2	16-0-0
J8	NJ60U	3.5	11.875			23	18-0-0
J9	NJ60U	3.5	11.875			2	16-0-0

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

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	LPI 20 Plus	2.5	11.875	LinFt		Varies	26-0-0
BLK1	NJ60H	2.5	11.875	LinFt		Varies	7-0-0
BLK3	NJ60U	3.5	11.875	LinFt		Varies	5-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	2	Unknown Hanger				
H2	16	LF2511			12 10dx1 1/2	1 #8x1 1/4WS
H3	1	HUS1.81/10			30 16d	10 16d
H4	1	LS90				
H7	13	LF3511			12 10d	2 #8x1 1/4WS

NOTES:

- Framer to verify dimensions on the architectural drawings.
- Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
- Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls.
- Install single-ply flush window header along inside face of rimboard/rimjoist
- Refer to Nascor specifier guide for installation details.
- Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
- Load transfer blocks to be installed under all point loads.
- It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF.

The framing shown on this layout may deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.

Legend

PS	Point Load Support
◊	Load from Above
Wall	Wall
Norbord Rimboard Plus 1.125 X 11.875	Norbord Rimboard Plus 1.125 X 11.875
LPI 20Plus 11.875	LPI 20Plus 11.875
NJ60H 11.875	NJ60H 11.875
NJ60U 11.875	NJ60U 11.875
Forex 2.0E-3000Fb LVL 1.75 X 11.875	Forex 2.0E-3000Fb LVL 1.75 X 11.875
5.25 X 10.25 (Dropped)	5.25 X 10.25 (Dropped)

NASCORLayout Name
LOT-12(CELESTIAL 1 EL-1 5BDRM)Design Method
LSDDescription
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON, ONCreated
May 31, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

Kott Lumber Company

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

Ground Floor

Design Method LSD

Building Code NBCC 2010 / 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/ 360

Decking

Deck OSB

Thickness 3/4"

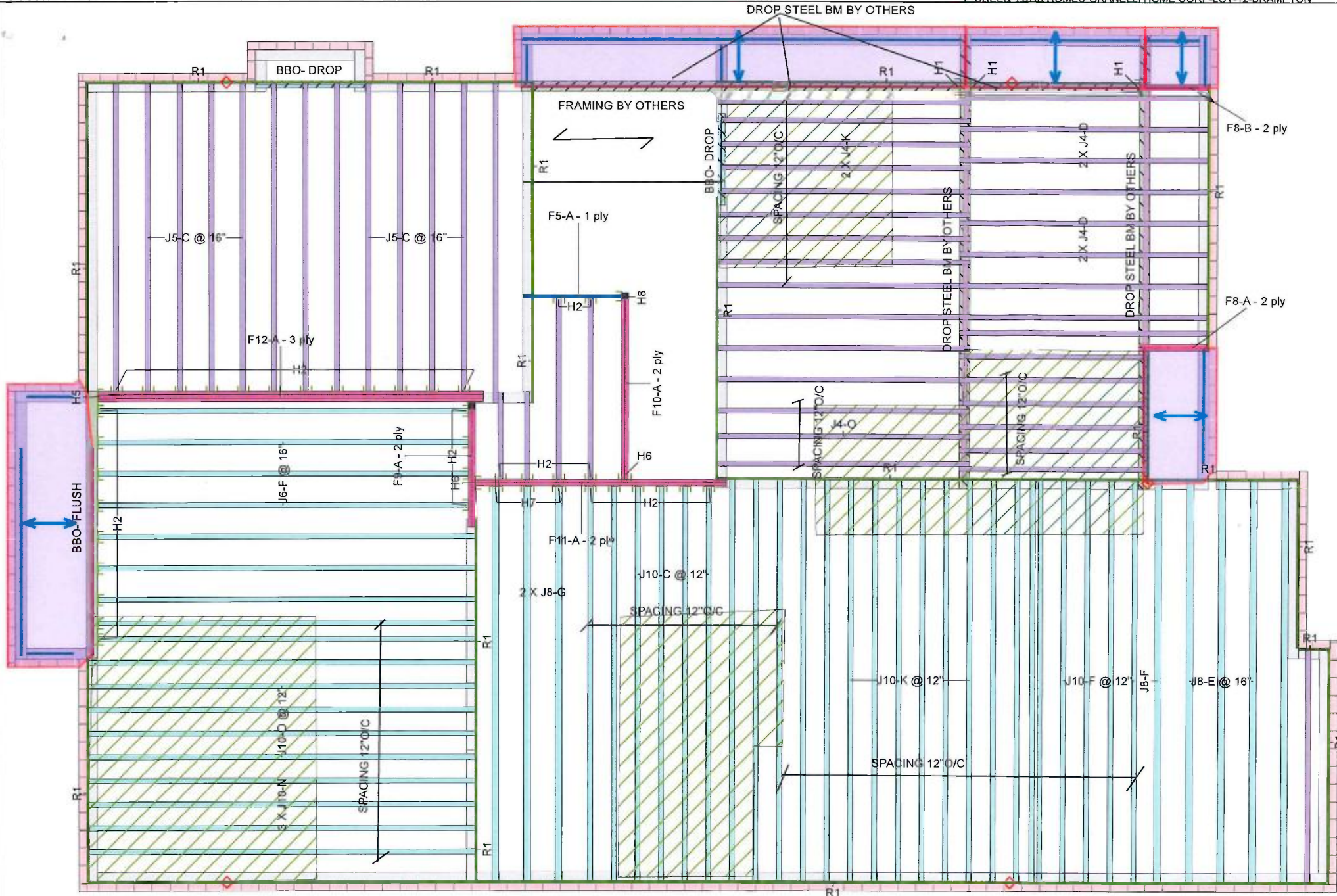
Fastener Nailed & Glued

Vibration

M-2057

LOT 12

KOTT



Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN, ON L4K 3P3
Project # 17-55
Model: LOT-12 (CELESTIAL 1 EL-1)
Date: AUG 30 2018

- OBC 2012 O.Reg 332/12 as amended
- Nascor CCMC - 13535-R
- LVL CCMC -12904-R
- CAN/CSA-O86-09
- CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16\"O/C
UNLESS
NOTED OTHERWISE

Legend

PS	Point Load Support
Load from Above	
Wall	
Norbord Rimboard Plus 1.125 X 11.875	
LPI 20Plus 11.875	
NJ60H 11.875	
NJ60U 11.875	
Forex 2.0E-3000Fb LVL 1.75 X 11.875	
1.75 X 9.5 (Dropped)	
5.25 X 10.25 (Dropped)	
5.75 X 10.25	

This certification is to confirm that:

- The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
 - The floor joists comply with the KOTT span table for the loads and spacing shown on this layout.
- The floor system must be assembled in accordance to the KOTT Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



January 04, 2019

Second Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	18-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	6-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	4-0-0

Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20Plus	2.5	11.875			13	14-0-0
J4	LPI 20Plus	2.5	11.875			24	12-0-0
J12	LPI 20Plus	2.5	11.875			1	10-0-0
J2	LPI 20Plus	2.5	11.875			8	8-0-0
J11	LPI 20Plus	2.5	11.875			2	4-0-0
J10	NJ60H	2.5	11.875			34	18-0-0
J6	NJ60H	2.5	11.875			9	16-0-0
J8	NJ60U	3.5	11.875			8	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			18	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK2	NJH	2.5	11.875	LinFt		Varies	20-0-0

Hanger

		Beam/Girder			Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	3	Unknown Hanger				
H2	37	LF2511			12 10d	1 #8x1 1/4WS
H5	1	HUC610 (Max)			18 16d	8 16d
H6	2	HGUS410			46 16d	16 16d
H7	3	LF3511			12 10d	2 #8x1 1/4WS
H8	1	HUCQ1.81/10-SDS				

NOTES:

- Framer to verify dimensions on the architectural drawings.
- Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
- Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls.
- Install single-ply flush window header along inside face of rimboard/rimjoist
- Refer to Nascor specifier guide for installation details.
- Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
- Load transfer blocks to be installed under all point loads.
- It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF.

The framing shown on this layout may deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.

NASCOR

Layout Name
LOT-12(CELESTIAL 1 EL-1 5BDRM)

Design Method
LSD

Description
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON, ON

Created
May 31, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

Kott Lumber Company

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

Second Floor
Design Method LSD
Building Code NBCC 2010 / 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/ 360

Decking
Deck OSB
Thickness 5/8"

Fastener Nailed & Glued
Vibration
Ceiling: Gypsum 1/2"

Roof Loads
Live 0
Dead 17
Snow 36

Deflection Joist
LL Span L/ 360
TL Span L/ 240
LL Cant 2L/ 360
TL Cant 2L/ 360

Deflection Girder
LL Span L/ 360
TL Span L/ 240
LL Cant 2L/ 360
TL Cant 2L/ 360

Decking
Deck SPF Plywood
Thickness 5/8"

Fastener Nailed Only

M-2057 LOT 12

KOTT

Engineering Note Page (ENP-2)

REVISION 2018-10-17

M-2057
LOT 12**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

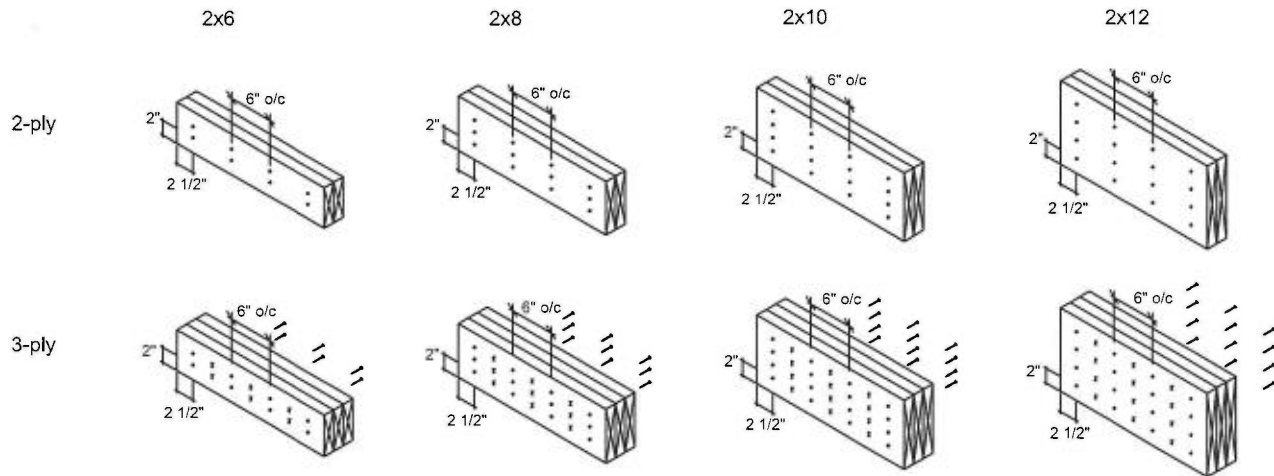
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies 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 component without a written pre-authorization.



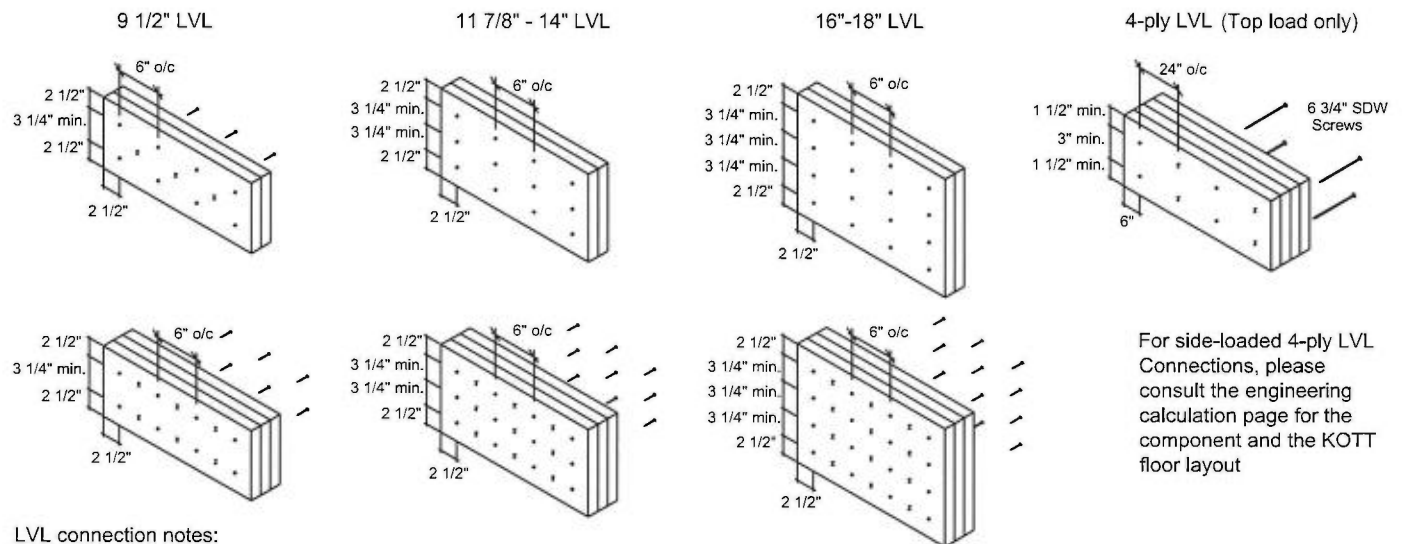
Conventional Connections



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.

LVL Connections



LVL connection notes:

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

For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the KOTT floor layout

Multiple Member Connections

All connections are for uniformly distributed loads.

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



KOTT Inc.
3228 Moodie Drive
Ottawa, ON
K2H 7V1
613-838-2775

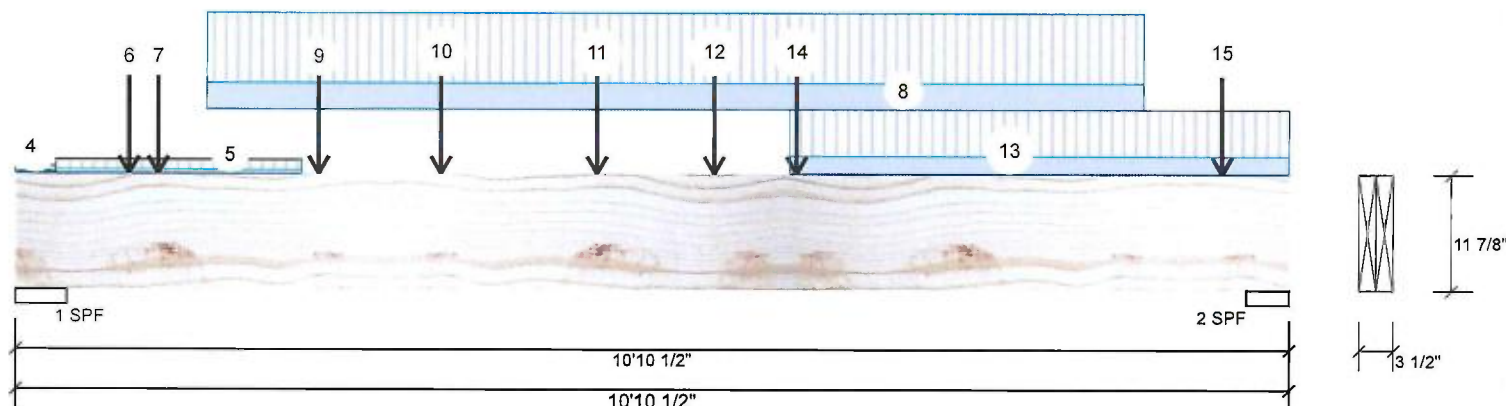


Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM
Project #:

Page 1 of 2

F11-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - **PASSED** Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	2989	1416	0	0
2	3270	1359	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	55% 1770 / 4483	6253	L	1.25D+1.5L
2 - SPF	4.375"	70% 1699 / 4905	6605	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15958 ft-lb	5'4 9/16"	34261 ft-lb	0.466 (47%)	1.25D+1.5L	L
Unbraced	15958 ft-lb	5'4 9/16"	29422 ft-lb	0.542 (54%)	1.25D+1.5L	L
Shear	6150 lb	1'4 3/8"	11596 lb	0.530 (53%)	1.25D+1.5L	L
Perm Defl in.	0.076 (L/1600)	5'4 5/8"	0.340 (L/360)	0.220 (22%)	D	Uniform
LL Defl inch	0.172 (L/710)	5'5 9/16"	0.340 (L/360)	0.510 (51%)	L	L
TL Defl inch	0.249 (L/492)	5'5 1/4"	0.510 (L/240)	0.490 (49%)	D+L	L

Design Notes

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

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-4-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-2	(Span)0-11-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-2-9		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-2-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Tie-In	0-4-2 to 2-5-5	(Span)2-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-11-10		Near Face	135 lb	360 lb	0 lb	0 lb	

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021



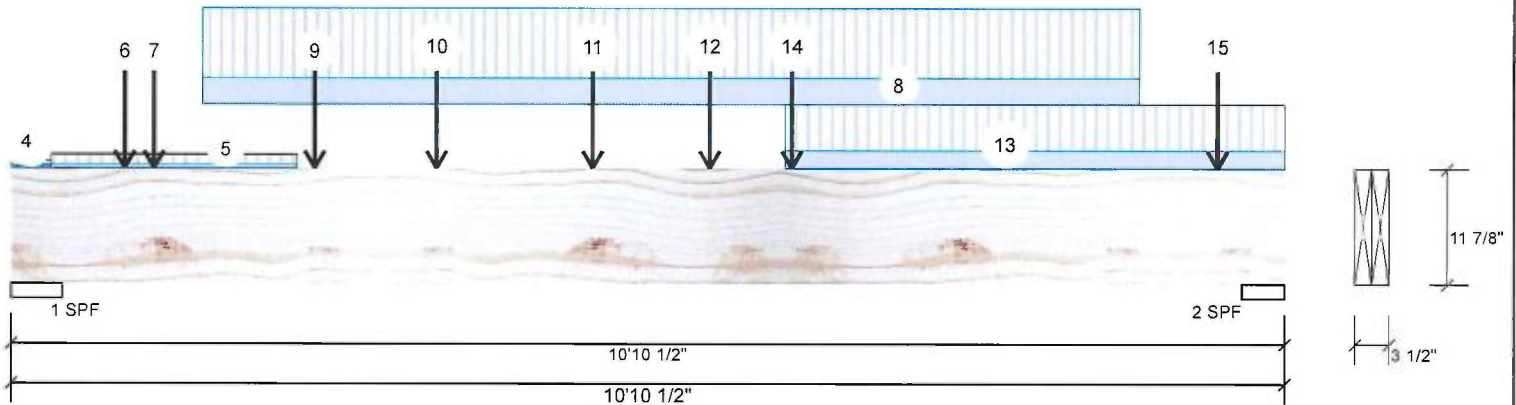


Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 2 of 2

F11-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
7	Point	1-2-10		Far Face	19 lb	50 lb	0 lb	0 lb	J11
8	Part. Uniform	1-7-10 to 9-7-10		Near Face	133 PLF	354 PLF	0 PLF	0 PLF	
9	Point	2-7-1		Far Face	564 lb	718 lb	0 lb	0 lb	F4
10	Point	3-7-10		Far Face	73 lb	194 lb	0 lb	0 lb	J12
11	Point	4-11-10		Far Face	71 lb	190 lb	0 lb	0 lb	J12
12	Point	5-11-10		Far Face	52 lb	139 lb	0 lb	0 lb	J12
13	Part. Uniform	6-7-5 to 10-10-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
14	Point	6-8-1		Far Face	93 lb	177 lb	0 lb	0 lb	F6
15	Point	10-3-10		Near Face	172 lb	458 lb	0 lb	0 lb	J8
	Self Weight				10 PLF				



January 04, 2019

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





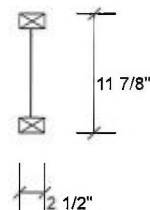
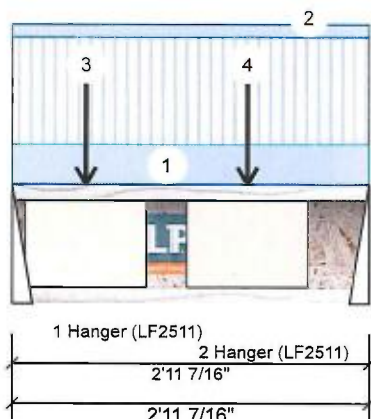
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 1

F13-A LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	421	209	0	0
2	349	173	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	2.000"	56% 261 / 631	892 L	1.25D+1.5L
2 - Hanger	2.000"	47% 217 / 524	740 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	644 ft-lb	1'11 5/16"	6250 ft-lb	0.103 (10%)	1.25D+1.5L	L
Shear	887 lb	1 1/4"	2345 lb	0.378 (38%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/9993)	1'11 5/16"	0.091 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.007 (L/4965)	1'11 5/16"	0.091 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.010 (L/3317)	1'11 5/16"	0.137 (L/240)	0.070 (7%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.003", Long Term = 0.005"
- 3 Fill all hanger nailing holes.
- 4 See manufacture installation guide note E4 for installation details
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top flange braced at bearings.
- 7 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-7	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-11-7		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-7-5		Far Face	157 lb	316 lb	0 lb	0 lb	J9
4	Point	1-11-5		Far Face	188 lb	378 lb	0 lb	0 lb	J9

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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Manufacturer Info

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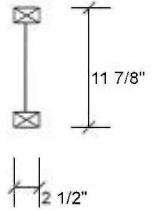
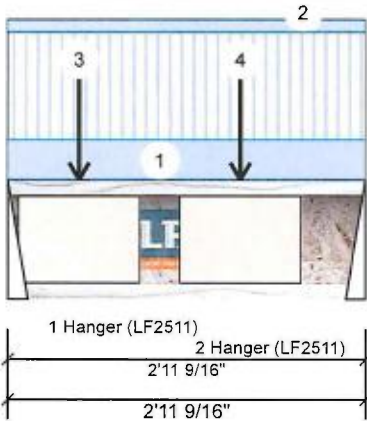
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Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

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F13-B LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	409	203	0	0
2	333	165	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	55%	254 / 613	867	L	1.25D+1.5L
2 - Hanger	2.000"	44%	206 / 500	706	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	629 ft-lb	1'11 1/16"	6250 ft-lb	0.101 (10%)	1.25D+1.5L	L
Shear	862 lb	1 1/4"	2345 lb	0.367 (37%)	1.25D+1.5L	L
Perm Defl in. (L/10276)	0.003	1'11 1/8"	0.092 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch (L/5095)	0.006	1'11 1/8"	0.092 (L/360)	0.070 (7%)	L	L
TL Defl inch (L/3406)	0.010	1'11 1/8"	0.138 (L/240)	0.070 (7%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.003", Long Term = 0.005"
- 3 Fill all hanger nailing holes.
- 4 See manufacture installation guide note E4 for installation details
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top flange braced at bearings.
- 7 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-9	(Span)1-3-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-11-9		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-7-1		Near Face	149 lb	299 lb	0 lb	0 lb	J6
4	Point	1-11-1		Near Face	181 lb	365 lb	0 lb		

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Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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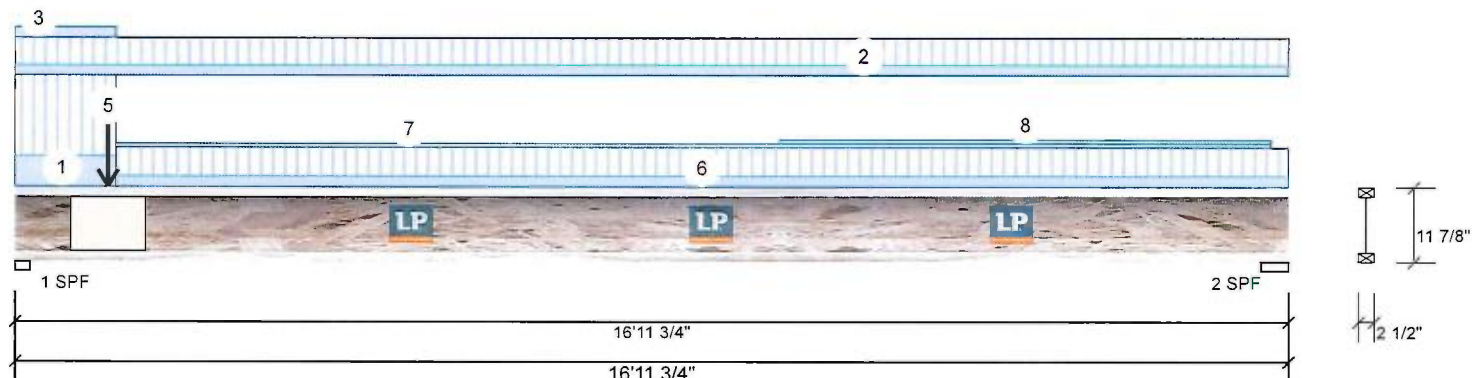
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Designer: S B
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Project #:

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F14-A LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	743	354	0	0
2	397	193	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	95%	442 / 1115	1557 L	1.25D+1.5L
2 - SPF	4.375"	46%	241 / 595	836 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3539 ft-lb	7'10 5/16"	6250 ft-lb	0.566 (57%)	1.25D+1.5L	L
Shear	1533 lb	1 5/8"	2345 lb	0.654 (65%)	1.25D+1.5L	L
Perm Defl in.	0.141 (L/1410)	8'3"	0.551 (L/360)	0.260 (26%)	D	Uniform
LL Defl inch	0.299 (L/664)	8'2 1/2"	0.551 (L/360)	0.540 (54%)	L	L
TL Defl inch	0.440 (L/451)	8'2 11/16"	0.827 (L/240)	0.530 (53%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.141", Long Term = 0.211"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 5'6" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-2	(Span)3-1-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-11-12	(Span)1-0-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-4-2		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Far Face	173 lb	349 lb	0 lb	0 lb	F13
6	Tie-In	1-4-2 to 16-11-12	(Span)1-1-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-8-15		Top	3 PLF	0 PLF	0 PLF	0 PLF	
8	Part. Uniform	10-2-5 to 16-9-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	

Pass-Thru Framing Squash Block is required at all point loads over bearings

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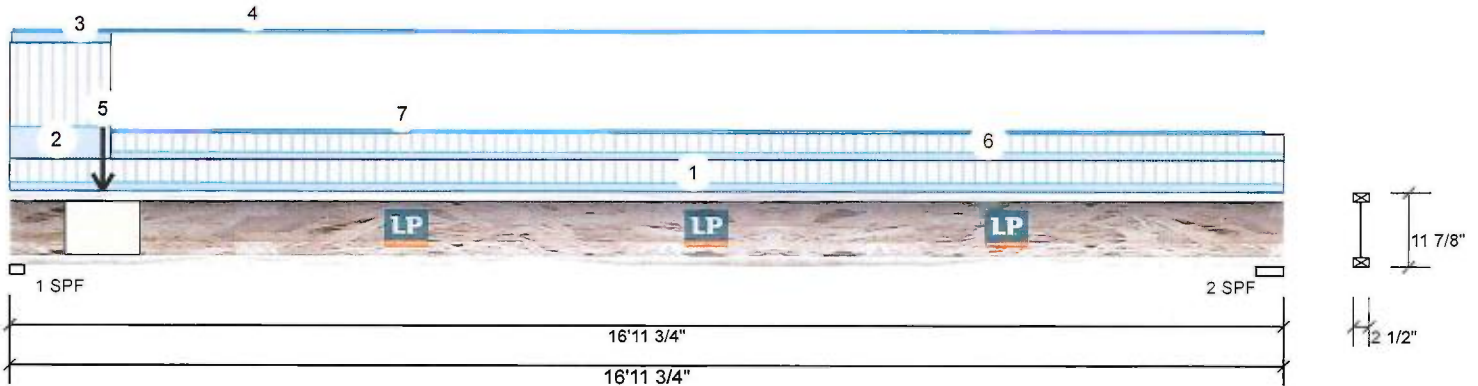
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Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

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F14-B LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	723	360	0	0
2	302	150	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	94%	450 / 1084	1534 L	1.25D+1.5L
2 - SPF	4.375"	35%	188 / 453	640 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2865 ft-lb	7'5 7/16"	6250 ft-lb	0.458 (46%)	1.25D+1.5L	L
Shear	1511 lb	1 5/8"	2345 lb	0.644 (64%)	1.25D+1.5L	L
Perm Defl in.	0.119 (L/1662)	8'1 1/4"	0.551 (L/360)	0.220 (22%)	D	Uniform
LL Defl inch	0.239 (L/831)	8'1 3/16"	0.551 (L/360)	0.430 (43%)	L	L
TL Defl inch	0.358 (L/554)	8'1 1/4"	0.827 (L/240)	0.430 (43%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.119", Long Term = 0.179"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 6'2" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-11-12	(Span)0-10-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-2	(Span)3-1-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-4 to 1-4-2		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-7 to 16-8-9		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Near Face	209 lb	421 lb	0 lb	0 lb	
6	Tie-In	1-4-2 to 16-11-12	(Span)0-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-8-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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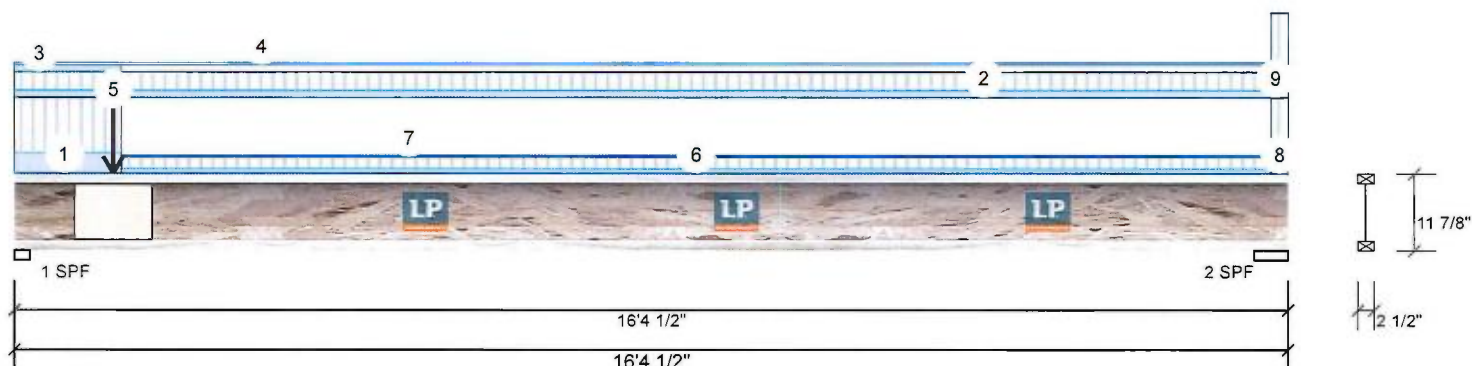
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Job Name: LOT-12/CELESTIAL 1 EL-1 5BDRM
Project #:

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F14-C LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	728	367	0	0
2	344	173	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	95%	459 / 1092	1551 L	1.25D+1.5L
2 - SPF	5.250"	40%	216 / 516	732 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2927 ft-lb	7'2 1/16"	6250 ft-lb	0.468 (47%)	1.25D+1.5L	L
Shear	1526 lb	1 5/8"	2345 lb	0.651 (65%)	1.25D+1.5L	L
Perm Defl in.	0.115 (L/1651)	7'9 7/16"	0.529 (L/360)	0.220 (22%)	D	Uniform
LL Defl inch	0.225 (L/848)	7'9 1/4"	0.529 (L/360)	0.420 (42%)	L	L
TL Defl inch	0.340 (L/560)	7'9 3/8"	0.793 (L/240)	0.430 (43%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.115", Long Term = 0.173"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 6'2" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-1-14	(Span)1-0-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-4-8		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 16-1-3		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-3-4		Far Face	203 lb	409 lb	0 lb	0 lb	
6	Tie-In	1-4-8 to 16-1-14	(Span)0-8-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-8 to 16-1-3		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

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Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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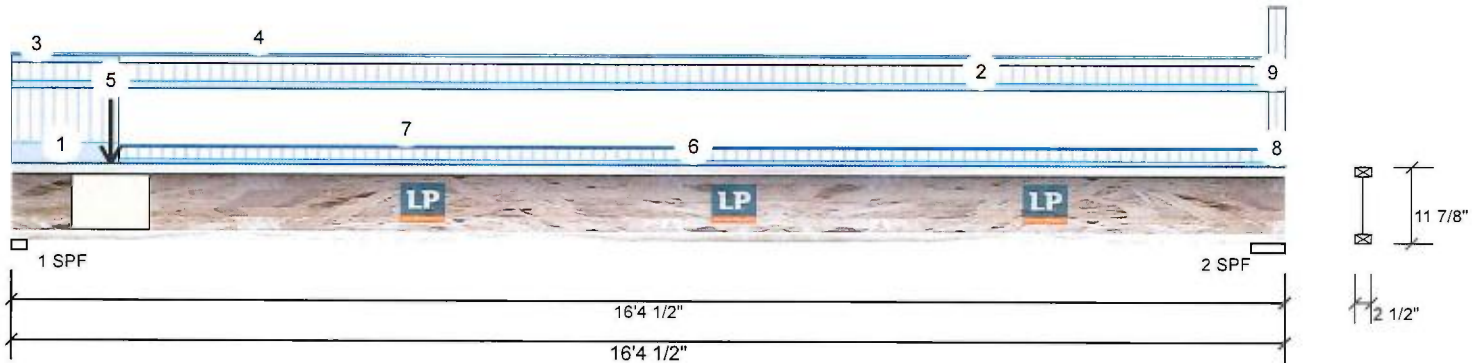
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F14-C LPI 20Plus 11.875" - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Tie-In	16-1-14 to 16-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Tie-In	16-1-14 to 16-4-8	(Span)3-6-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	



January 04, 2019

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**Pass-Thru Framing Squash Block is
required at all point loads over bearings**

**Refer to Multiple Member Connection
Detail for ply to ply nailing or bolting
requirements**

Notes

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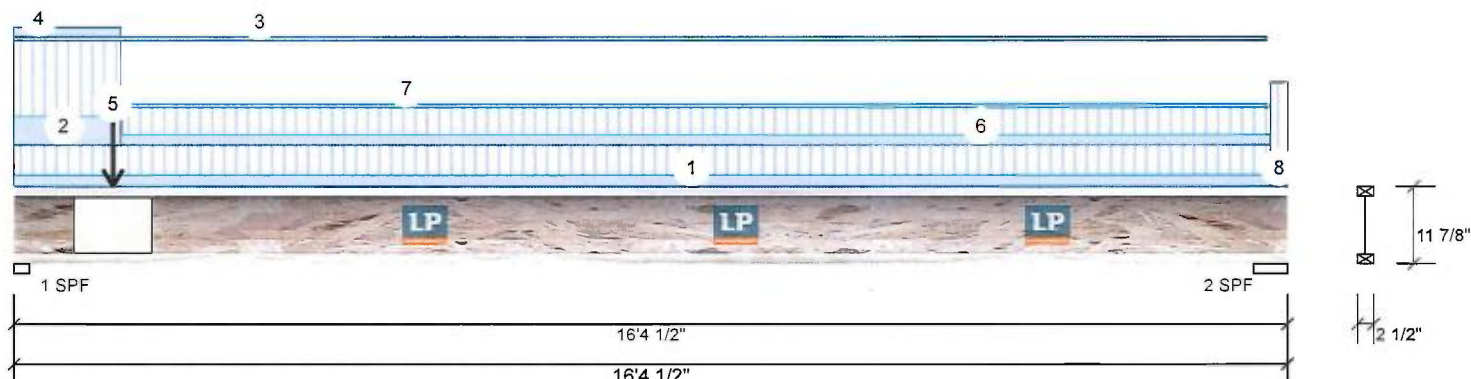
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F14-D LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	753	375	0	0
2	431	213	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	98%	468 / 1129	1598 L	1.25D+1.5L
2 - SPF	5.250"	50%	266 / 646	912 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3678 ft-lb	7'6 7/16"	6250 ft-lb	0.589 (59%)	1.25D+1.5L	L
Shear	1572 lb	1 5/8"	2345 lb	0.670 (67%)	1.25D+1.5L	L
Perm Defl in.	0.141 (L/1349)	7'10 5/8"	0.529 (L/360)	0.270 (27%)	D	Uniform
LL Defl inch	0.283 (L/672)	7'10 5/8"	0.529 (L/360)	0.540 (54%)	L	L
TL Defl inch	0.424 (L/449)	7'10 5/8"	0.793 (L/240)	0.530 (53%)	D+L	L

Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.141", Long Term = 0.212"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 5'5" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-1-14	(Span)1-3-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 16-1-5		Top	3 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 1-4-8		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-3-4		Near Face	165 lb	333 lb	0 lb	0 lb	
6	Tie-In	1-4-8 to 16-1-14	(Span)1-1-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-8 to 16-1-5		Top	3 PLF	0 PLF	0 PLF	0 PLF	
8	Tie-In	16-1-14 to 16-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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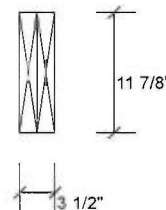
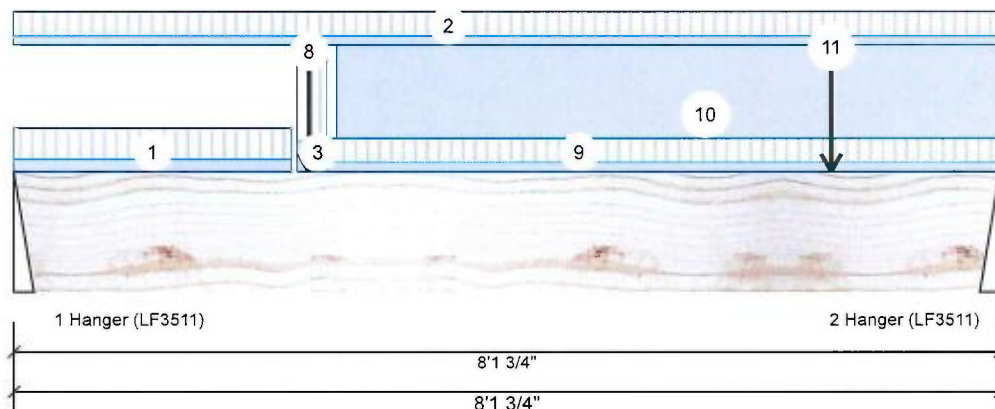
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Client:
Project:
Address:Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 2

F4-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 2010 / 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	718	564	0	0
2	682	642	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	2.000"	34% 705 / 1076	1781 L	1.25D+1.5L
2 - Hanger	2.000"	35% 802 / 1023	1825 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3845 ft-lb	2'6 9/16"	34261 ft-lb	0.112 (11%)	1.25D+1.5L	L
Unbraced	3845 ft-lb	2'6 9/16"	31329 ft-lb	0.123 (12%)	1.25D+1.5L	L
Shear	1664 lb	1'1 1/8"	11596 lb	0.144 (14%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/5107)	3'11 7/16"	0.265 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.021 (L/4600)	3'9 7/16"	0.265 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.039 (L/2421)	3'10 3/8"	0.397 (L/240)	0.100 (10%)	D+L	L

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.

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-3-9	(Span)1-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-1-12	(Span)1-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	2-4-2 to 2-7-1	(Span)3-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	2-5-5		Top	85 lb	226 lb	0 lb	0 lb	Pass-Through Framing Squash Block is required at all point loads over bearings
5	Point	2-5-5		Top	19 lb	52 lb	0 lb	0 lb	Refer to Multiple Member Connection Detail for ply-to-ply nailing or bolting requirements
6	Point	2-5-5		Top	77 lb	0 lb	0 lb	0 lb	

Continued on page 2...

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

3. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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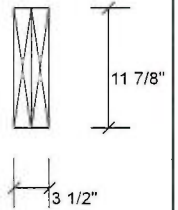
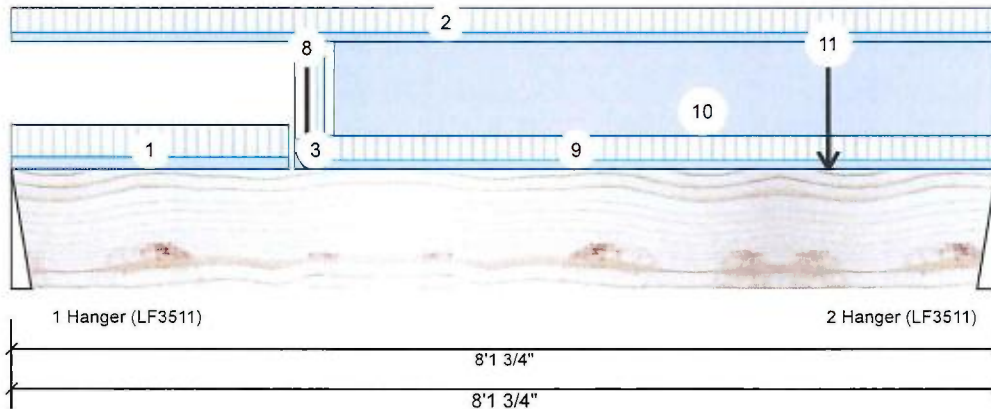
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 2 of 2

F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	2-5-5		Top	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Point	2-5-5		Far Face	191 lb	383 lb	0 lb	0 lb	F8
9	Tie-In	2-7-1 to 8-1-12	(Span)1-0-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
10	Part. Uniform	2-8-1 to 8-1-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Point	6-9-1		Top	151 lb	373 lb	0 lb	0 lb	F5 F5
	Self Weight				10 PLF				



January 04, 2019

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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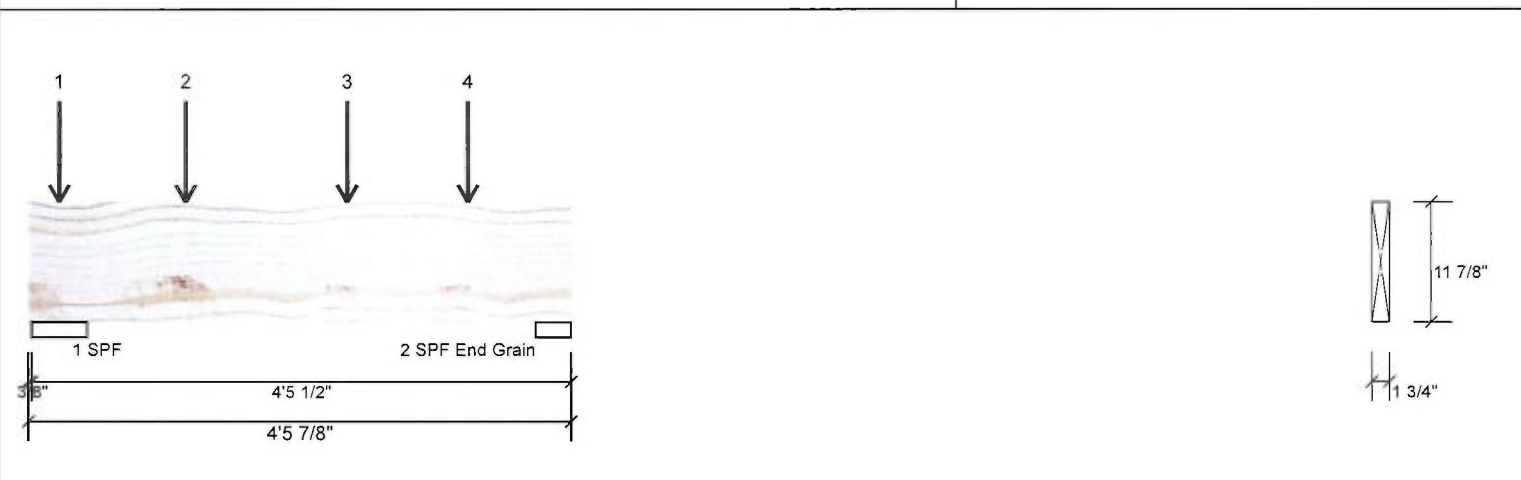
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Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 1

F5-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 2010 / 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	550	392	0	0
2	281	116	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	22%	489 / 825	1314	_L	1.25D+1.5L
2 - SPF	3.500"	12%	145 / 422	566	_L	1.25D+1.5L
End Grain						

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	635 ft-lb	2'7 5/8"	17130 ft-lb	0.037 (4%)	1.25D+1.5L	_L
Unbraced	635 ft-lb	2'7 5/8"	11243 ft-lb	0.056 (6%)	1.25D+1.5L	_L
Shear	559 lb	3'3 1/4"	5798 lb	0.096 (10%)	1.25D+1.5L	_L
Perm Defl in.	0.001 (L/33902)	2'5 13/16"	0.133 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/13739)	2'6 5/16"	0.133 (L/360)	0.030 (3%)	L	LL
TL Defl inch	0.005 (L/9777)	2'6 1/8"	0.200 (L/240)	0.020 (2%)	D+L	LL
LL Cant	-0.000 (2L/16891)	Lt Cant	0.200 (2L/480)	0.000 (0%)	L	LL
TL Cant	-0.000 (2L/12012)	Lt Cant	0.300 (2L/360)	0.000 (0%)	D+L	LL



January 04, 2019

Design Notes

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

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-2		Near Face	290 lb	308 lb	0 lb	0 lb	F4
2	Point	1-3-10		Near Face	73 lb	194 lb	0 lb	0 lb	J12
3	Point	2-7-10		Near Face	71 lb	190 lb	0 lb	0 lb	J12
4	Point	3-7-10		Near Face	52 lb	139 lb	0 lb	0 lb	J12
	Self Weight				5 PLF				

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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Client:

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Date: 1/4/2019

Designer: S B

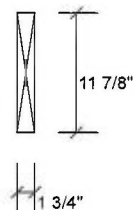
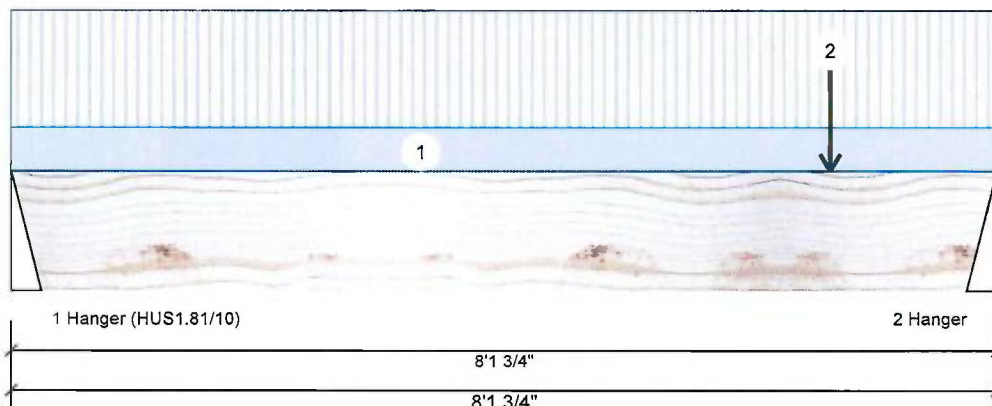
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)

Project #:

Page 1 of 1

F6-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 2010 / 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	177	93	0	0
2	718	329	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	10%	116 / 265	381	L	1.25D+1.5L
2 - Hanger	3.000"	38%	411 / 1077	1487	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1740 ft-lb	6'9 3/16"	17130 ft-lb	0.102 (10%)	1.25D+1.5L	L
Unbraced	1740 ft-lb	6'9 3/16"	5785 ft-lb	0.301 (30%)	1.25D+1.5L	L
Shear	1448 lb	6'11 5/8"	5798 lb	0.250 (25%)	1.25D+1.5L	L
Perm Defl in. (L/10723)	0.009	4'8 5/8"	0.259 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.018 (L/5141)	4'9 9/16"	0.259 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.027 (L/3475)	4'9 5/16"	0.389 (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.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind
1	Tie-In	0-0-0 to 8-1-12	(Span)0-8-7	Top	15 PSF	40 PSF	0 PSF	0 PSF
2	Point	6-9-4		Top	340 lb	780 lb	0 lb	0 lb C5
	Self Weight				5 PLF			



January 04, 2019

Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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, multiply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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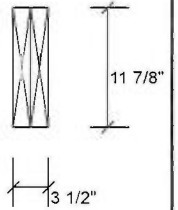
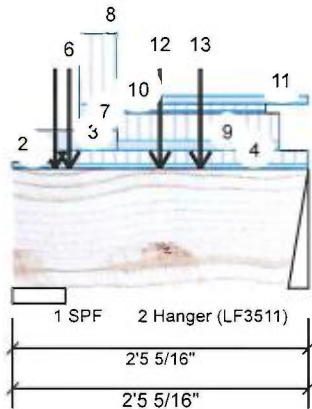
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 2

F8-C 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 2010 / 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	2902	1305	0	0
2	383	191	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	54%	1631 / 4353	5984	L	1.25D+1.5L
2 - Hanger	2.000"	16%	238 / 575	813	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	528 ft-lb	1'6 5/8"	34261 ft-lb	0.015 (2%)	1.25D+1.5L	L
Unbraced	528 ft-lb	1'6 5/8"	34261 ft-lb	0.015 (2%)	1.25D+1.5L	L
Shear	853 lb	1'4 3/8"	11596 lb	0.074 (7%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/58768)	1'5 13/16"	0.066 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/27132)	1'6 5/8"	0.066 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/18576)	1'6 3/8"	0.098 (L/240)	0.010 (1%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on full section width.

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-10-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-2-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	Pass-Thru Framing Squash Block is required at all point loads over bearings
3	Part. Uniform	0-0-0 to 0-10-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

Continued on page 2...

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals

Handling & Installation

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

5. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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Client:

Project:

Address:

Date: 1/4/2019

Designer: S B

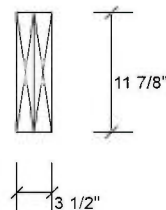
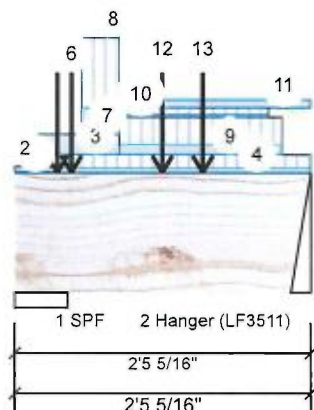
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)

Project #:

Page 2 of 2

F8-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Tie-In	0-4-2 to 2-5-5	(Span)2-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	0-4-4		Top	965 lb	2248 lb	0 lb	0 lb	F12 F12
6	Point	0-5-10		Far Face	119 lb	318 lb	0 lb	0 lb	J5
7	Part. Uniform	0-6-10 to 0-10-6		Top	103 PLF	275 PLF	0 PLF	0 PLF	J5
8	Part. Uniform	0-9-2 to 0-10-6		Top	26 PLF	68 PLF	0 PLF	0 PLF	J11
9	Part. Uniform	0-10-6 to 2-2-7		Top	40 PLF	107 PLF	0 PLF	0 PLF	J5
10	Part. Uniform	0-10-6 to 2-1-2		Top	10 PLF	27 PLF	0 PLF	0 PLF	J11
11	Part. Uniform	0-10-6 to 2-5-5		Top	31 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Point	1-2-10		Near Face	19 lb	50 lb	0 lb	0 lb	J11
13	Point	1-6-10		Far Face	107 lb	285 lb	0 lb	0 lb	J5
	Self Weight				10 PLF				



January 04, 2019

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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Client:

Project:

Address:

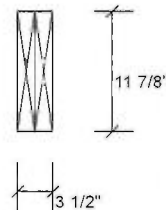
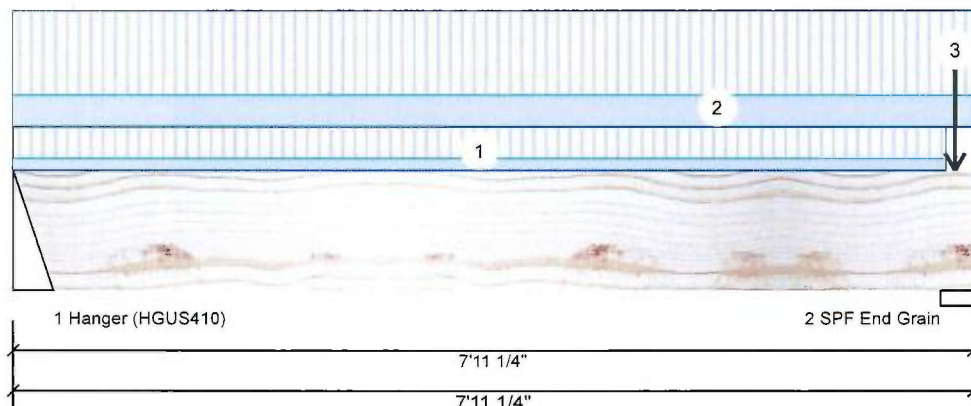
Date: 1/4/2019

Designer: S B

Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)

Project #:

Page 1 of 1

F10-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 2010 / 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	427	198	0	0
2	780	340	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	9%	248 / 641	888	L	1.25D+1.5L
2 - SPF End Grain	3.250"	19%	425 / 1170	1594	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1544 ft-lb	4'	34261 ft-lb	0.045 (5%)	1.25D+1.5L	L
Unbraced	1544 ft-lb	4'	31673 ft-lb	0.049 (5%)	1.25D+1.5L	L
Shear	608 lb	6'8 7/8"	11596 lb	0.052 (5%)	1.25D+1.5L	L
Perm Defl in. (L/19948)	0.004	4'	0.249 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch (L/9260)	0.010	4'	0.249 (L/360)	0.040 (4%)	L	L
TL Defl inch (L/6324)	0.014	4'	0.373 (L/240)	0.040 (4%)	D+L	L

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.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 7-8-9	(Span)1-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 7-11-4	(Span)3-10-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	7-9-7		Far Face	147 lb	366 lb	0 lb	0 lb	Pass-Thru Framing Squash Block is required at all point loads over bearings
	Self Weight				10 PLF				Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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Client:

Project:

Address:

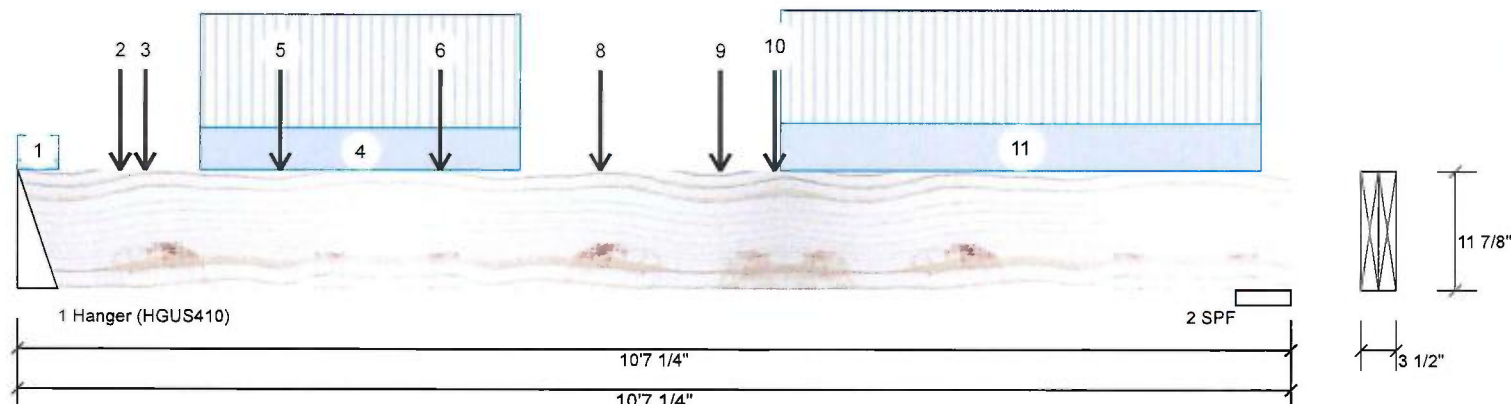
Date: 1/4/2019

Designer: S B

Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM

Project #:

Page 1 of 2

F11-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 2010 / 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	2173	893	0	0
2	2133	923	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	42%	1116 / 3260	4376	L	1.25D+1.5L
2 - SPF	5.500"	37%	1154 / 3199	4353	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11828 ft-lb	4'10 1/4"	34261 ft-lb	0.345 (35%)	1.25D+1.5L	L
Unbraced	11828 ft-lb	4'10 1/4"	29666 ft-lb	0.399 (40%)	1.25D+1.5L	L
Shear	4972 lb	1'3 1/8"	11596 lb	0.429 (43%)	1.25D+1.5L	L
Perm Defl in.	0.051 (L/2357)	5'3 1/4"	0.331 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.121 (L/989)	5'2 11/16"	0.331 (L/360)	0.360 (36%)	L	L
TL Defl inch	0.171 (L/697)	5'2 7/8"	0.497 (L/240)	0.340 (34%)	D+L	L

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.

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)3-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-10-4		Near Face	135 lb	360 lb	0 lb	0 lb	J8
3	Point	1-0-12		Far Face	30 lb	80 lb	0 lb	0 lb	
4	Part. Uniform	1-6-4 to 4-2-4		Near Face	124 PLF	330 PLF	0 PLF	0 PLF	Pass-Thru Framing Squash Block is required at all point loads over bearings
5	Point	2-2-4		Far Face	31 lb	84 lb	0 lb	0 lb	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
6	Point	3-6-4		Far Face	75 lb	200 lb	0 lb	0 lb	

Continued on page 2...

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





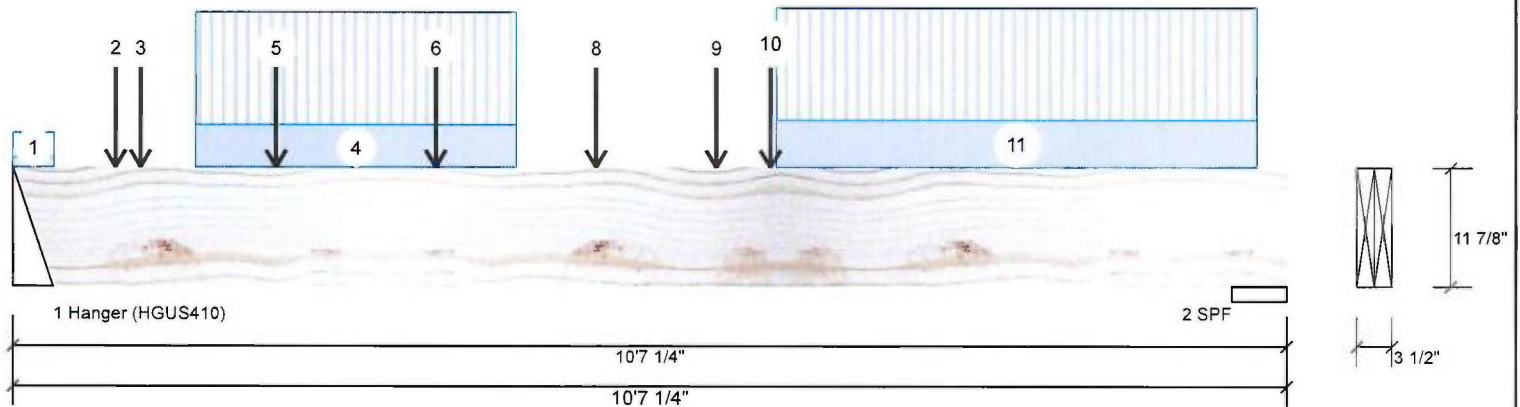
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Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 2 of 2

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - **PASSED** Level: Second Floor



Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	4-10-4		Far Face	81 lb	215 lb	0 lb	0 lb	J2
8	Point	4-10-4		Near Face	144 lb	385 lb	0 lb	0 lb	J10
9	Point	5-10-4		Near Face	129 lb	330 lb	0 lb	0 lb	J10
10	Point	6-3-11		Far Face	198 lb	427 lb	0 lb	0 lb	F10
11	Part. Uniform	6-4-4 to 10-4-4		Near Face	138 PLF	330 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF				



January 04, 2019

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021



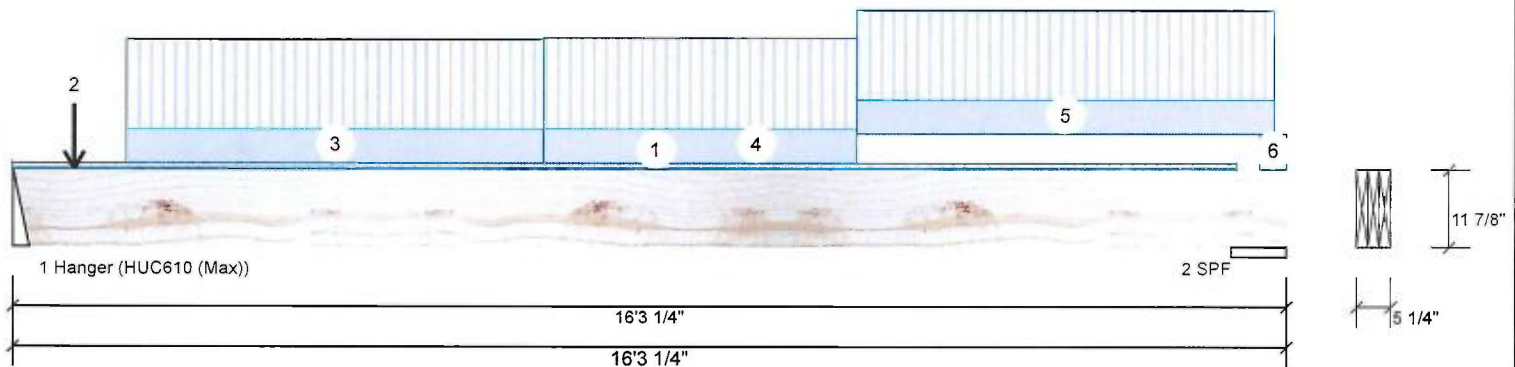


Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM
Project #:

Page 1 of 1

F12-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 2010 / 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	2091	898	0	0
2	2248	965	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.500"	44%	1123 / 3136	4259 L	1.25D+1.5L
2 - SPF	8.469"	17%	1206 / 3373	4578 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16539 ft-lb	7'10 3/4"	53447 ft-lb	0.309 (31%)	1.25D+1.5L	L
Unbraced	16539 ft-lb	7'10 3/4"	49731 ft-lb	0.333 (33%)	1.25D+1.5L	L
Shear	4714 lb	1'1 5/8"	17394 lb	0.271 (27%)	1.25D+1.5L	L
Perm Defl in.	0.109 (L/1707)	7'10 11/16"	0.516 (L/360)	0.210 (21%)	D	Uniform
LL Defl inch	0.254 (L/731)	7'10 11/16"	0.516 (L/360)	0.490 (49%)	L	L
TL Defl inch	0.363 (L/512)	7'10 11/16"	0.774 (L/240)	0.470 (47%)	D+L	L

Design Notes

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

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-7-10	(Span)0-7-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-6		Far Face	123 lb	328 lb	0 lb	0 lb	J5
3	Part. Uniform	1-5-6 to 6-9-6		Far Face	97 PLF	258 PLF	0 PLF	0 PLF	Pass-Thru Framing Squash Block is required at all point loads over bearings
4	Part. Uniform	6-9-6 to 10-9-6		Far Face	98 PLF	261 PLF	0 PLF	0 PLF	
5	Part. Uniform	10-9-6 to 16-1-6		Far Face	97 PLF	258 PLF	0 PLF	0 PLF	Refer to Multiple Member Connection Details for ply to ply nailing or bolting requirements
6	Tie-In	15-11-2 to 16-3-4	(Span)3-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				14 PLF				

Notes

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

Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





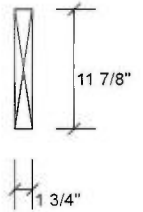
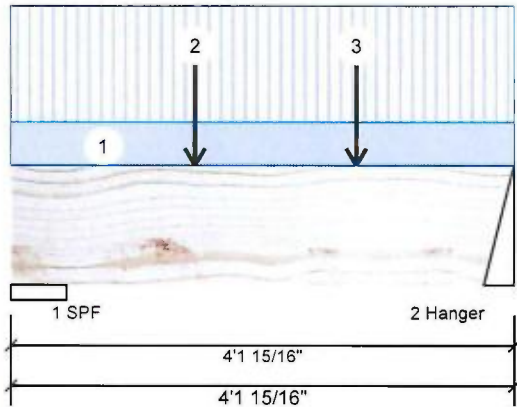
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 1

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

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / 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	373	151	0	0
2	366	147	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.500"	13% 188 / 559	748 L	1.25D+1.5L
2 - Hanger	3.000"	19% 184 / 549	733 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	711 ft-lb	2'3 1/4"	17130 ft-lb	0.041 (4%)	1.25D+1.5L	L
Unbraced	711 ft-lb	2'3 1/4"	12369 ft-lb	0.057 (6%)	1.25D+1.5L	L
Shear	540 lb	2'11 13/16"	5798 lb	0.093 (9%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/29239)	2'2 1/2"	0.119 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/11617)	2'2 9/16"	0.119 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.005 (L/8314)	2'2 9/16"	0.179 (L/240)	0.030 (3%)	D+L	L

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.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 4-1-15		Top	30 PLF	80 PLF	0 PLF	0 PLF	
2	Point	1-6-4		Near Face	72 lb	191 lb	0 lb	0 lb	J2
3	Point	2-10-4		Near Face	81 lb	215 lb	0 lb	0 lb	J2
	Self Weight				5 PLF				

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

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021



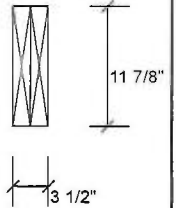
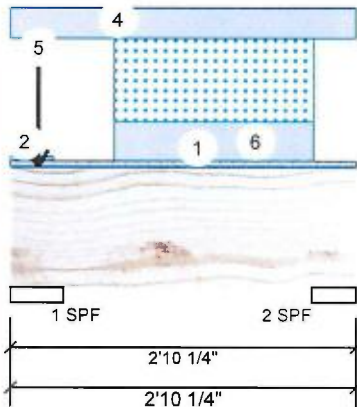


Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 2

F8-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 2010 / 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	20	514	745	0
2	17	232	215	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	16%	642 / 1128	1770 L	1.25D+1.5S +0.5L
2 - SPF	4.375"	7%	290 / 331	622 L	1.25D+1.5S +0.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	318 ft-lb	1'6 1/16"	34261 ft-lb	0.009 (1%)	1.25D+1.5S L +0.5L	
Unbraced	318 ft-lb	1'6 1/16"	34261 ft-lb	0.009 (1%)	1.25D+1.5S L +0.5L	
Shear	82 lb	1'4 3/8"	11596 lb	0.007 (1%)	1.25D+1.5S L +0.5L	
Perm Defl in.	0.000 (L/64863)	1'5 13/16"	0.073 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.000 (L/59654)	1'6 1/16"	0.073 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.001 (L/31078)	1'6"	0.109 (L/240)	0.010 (1%)	D+S+0.5L	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 THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



January 04, 2019

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
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L4A 7X4
905-642-4400



This design is valid until 10/18/2021





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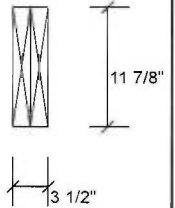
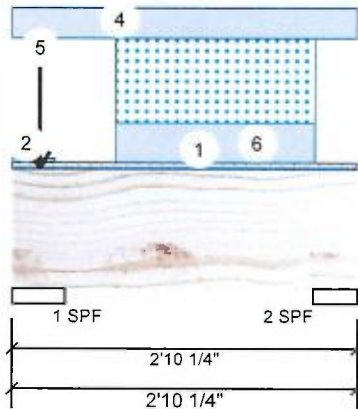
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 2 of 2

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-4	(Span)0-7-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-4	(Span)0-4-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-0-0 to 2-10-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Point	0-2-12		Top	307 lb	0 lb	601 lb	0 lb	F2 F2
6	Part. Uniform	0-10-5 to 2-6-0		Top	103 PLF	0 PLF	219 PLF	0 PLF	
	Self Weight				10 PLF				



January 04, 2019

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Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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, multiply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



This design is valid until 10/18/2021





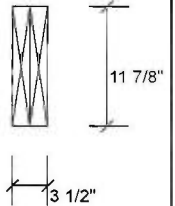
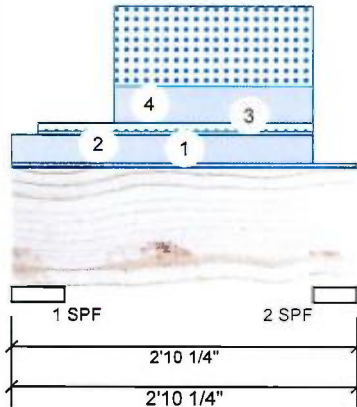
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 1

F8-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 2010 / 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	13	217	175	0
2	12	211	237	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.250"	5% 271 / 268	540 L	1.25D+1.5S +0.5L
2 - SPF	4.375"	7% 263 / 356	619 L	1.25D+1.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	342 ft-lb	1'6"	33918 ft-lb	0.010 (1%)	1.25D+1.5S	L
Unbraced	342 ft-lb	1'6"	33918 ft-lb	0.010 (1%)	1.25D+1.5S	L
Shear	84 lb	1'4 3/8"	11480 lb	0.007 (1%)	1.25D+1.5S	L
Perm Defl in.	0.000 (L/61871)	1'5 13/16"	0.073 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.000 (L/53786)	1'6 1/16"	0.073 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.001 (L/28775)	1'5 15/16"	0.109 (L/240)	0.010 (1%)	D+S+0.5L	L

Design Notes

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

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-4	(Span)0-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-5-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-2-10 to 2-5-14		Top	10 PLF	0 PLF	23 PLF	0 PLF	Pass Thru Framing Squash Block is required at all point loads over bearings
4	Part. Uniform	0-10-3 to 2-5-14		Top	103 PLF	0 PLF	219 PLF	0 PLF	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
	Self Weight				10 PLF				

Notes

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Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



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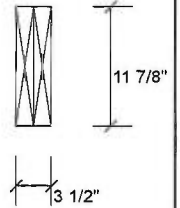
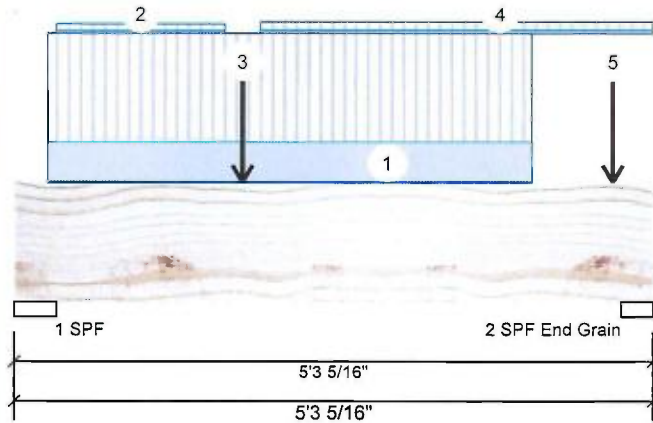
Client:
Project:
Address:

Date: 1/4/2019
Designer: S B
Job Name: LOT-12(CELESTIAL 1 EL-1 5BDRM)
Project #:

Page 1 of 1

F9-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 2010 / 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	2234	915	0	0
2	1600	650	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.188"	50%	1143 / 3352	4495 L	1.25D+1.5L
2 - SPF	3.153"	39%	813 / 2400	3213 L	1.25D+1.5L
End Grain					

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6320 ft-lb	1'10 5/8"	34261 ft-lb	0.184 (18%)	1.25D+1.5L	L
Unbraced	6320 ft-lb	1'10 5/8"	33194 ft-lb	0.190 (19%)	1.25D+1.5L	L
Shear	3946 lb	1'3 5/16"	11596 lb	0.340 (34%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/7243)	2'2 5/8"	0.160 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.019 (L/2959)	2'2 11/16"	0.160 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.027 (L/2101)	2'2 5/8"	0.239 (L/240)	0.110 (11%)	D+L	L

Design Notes

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- Top braced at bearings.
- Bottom braced at bearings.
- Lateral slenderness ratio based on full section width.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-3-5 to 4-3-5		Far Face	117 PLF	313 PLF	0 PLF	0 PLF	
2	Tie-In	0-4-2 to 1-8-14	(Span)1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-10-10		Near Face	893 lb	2173 lb	0 lb	0 lb	F11
4	Tie-In	2-0-6 to 5-3-5	(Span)1-2-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	4-11-5		Far Face	114 lb	303 lb	0 lb	0 lb	
	Self Weight				10 PLF				

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

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Lumber

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Handling & Installation

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