Engineering Note Page (ENP-2)

REVISION 2009-10-09

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 NASCOR 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 squash blocks. Structural elements such as walls, posts, connectors, and squash 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 NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at http://www.nascor.ca.

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 squash block framing is required at all point loads over bearings.

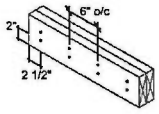
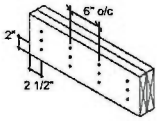
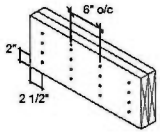
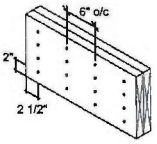
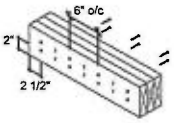
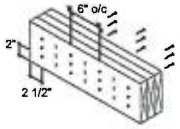
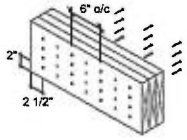
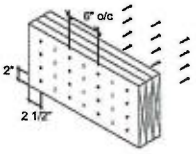
HANDLING AND INSTALLATION

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

KOTT

MULTIPLE MEMBER CONNECTIONS

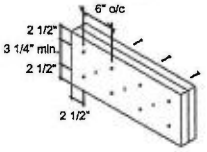
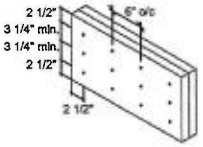
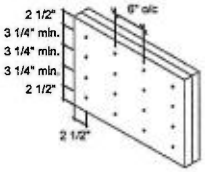
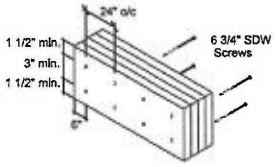
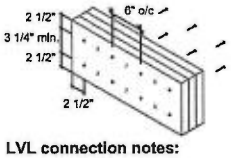
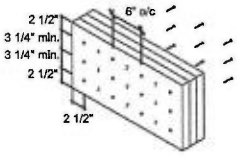
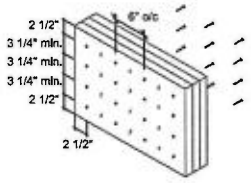
Conventional Connections (for uniform distributed loads)

	2x6	2x8	2x10	2x12
2-ply				
3-ply				

Conventional connection notes:

-Nails to be 3" 10d spiral wire nails.
-Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)

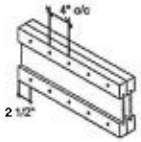
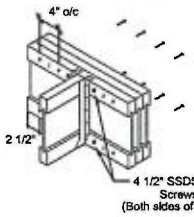
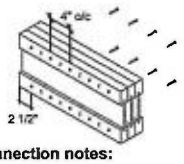
	9 1/2" LVL	11 7/8" - 14" LVL	16"-18" LVL	4-ply (Top load only)
				
				

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

LVL connection notes:

-Nails to be 3 1/2" spiral wire nails.
-Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in 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.

Vertical I-Joist Connections (for uniform distributed loads)

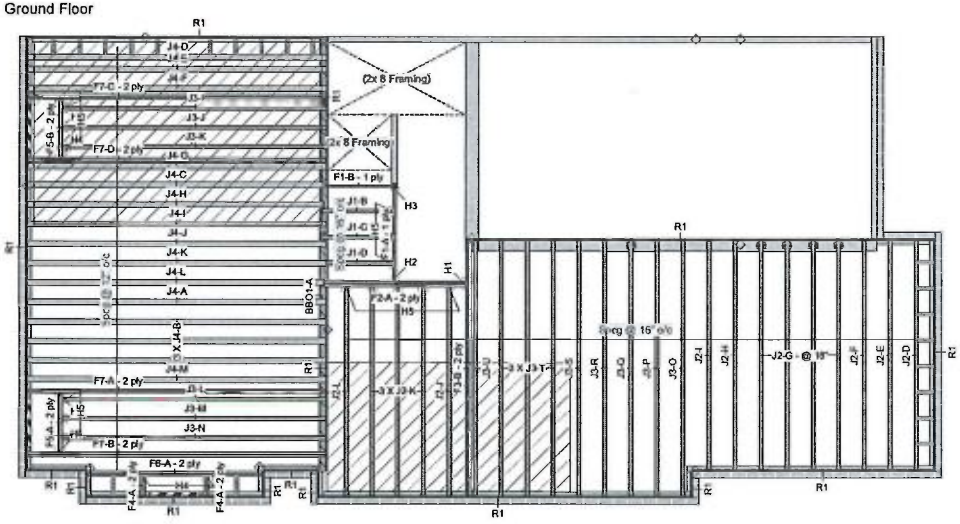
	9 1/2" - 11 7/8" I-Joist	3-ply I-Joist w/ point load (Joist Hanger)
2-ply		
3-ply		

Vertical I-Joist connection notes:

-Nails to be 3" spiral wire nails.
-Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

KOTT
3228 Moodie Drive
Ottawa, ON
K2H 7V1
Ph: 613-838-2775
Fax: 613-838-4751

Ground Floor



This certification is to confirm that:
1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor 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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

September 13, 2018

Legend

- Load from Above
- Wall
- Wall Opening
- Norbord Rimboard Plus 1.125 X 9.5
- NJ 9.5
- NJ40U 9.5
- NJH 9.5
- Forex 2.0E-3000Fb LVL 1.75 X 9.5

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC - 14056-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

Ground Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	6-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F7	NJ	1.5	9.5	4	2	8	16-0-0
F6	NJ	1.5	9.5	1	2	2	10-0-0
F5	NJ	1.5	9.5	2	2	4	4-0-0
F4	NJ	1.5	9.5	2	2	4	2-0-0
J4	NJ40U	3.5	9.5			15	16-0-0
J3	NJH	2.5	9.5			15	14-0-0
J2	NJH	2.5	9.5			14	12-0-0
J1	NJH	2.5	9.5			3	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			12	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	16-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HGUS410			46 16d	16 16d
H2	1	HUS1.81/10			30 16d	10 16d
H3	1	HUCQ1.81/9-SDS				
H4	6	LT2-169			4 10dx1 1/2	2 10dx1 1/2
H5	14	LT259			4 10dx1 1/2	2 10dx1 1/2

NOTES:

1. Framer to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. 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.
7. Load transfer blocks to be installed under all point loads.
8. 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"x 4" 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 addtional dead load of 5 PSF

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.
64 Jardin Dr., Suite 3A, Vaughan, ON
Date: Rev.3; Aug.30,2018
Project No: 18-24
Model: Clover 11A

NASCOR

Layout Name	CLOVER 11A-1
Design Method	LSD
Description	MINNISALE HOMES BRAMPTON, ONT.
Created	July 03, 2018
Builder	GREENPARK
Sales Rep	RM
Designer	RCO
Shipping	
Project	
Builder's Project	

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

Job Path
D:\Users\rochaville\WORK FROM HOME\GREENPARK\MINNISALE HOMES\CLOVER 11A\FLOOR\REV\CLOVER 11A.isl

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	SPF Plywood
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

KOTT

isDesign™

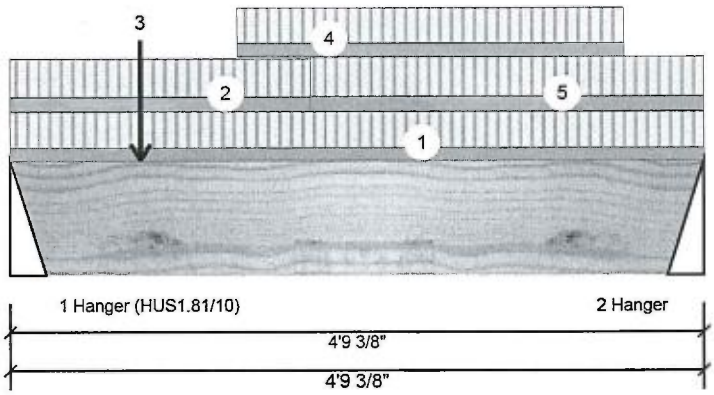
Client: GREENPARK
Project:
Address:

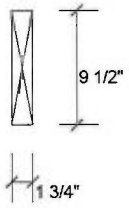
Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

Page 1 of 1

F1-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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	497	196	0	0
2	487	191	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	25%	244 / 745	990	L	1.25D+1.5L
2 - Hanger	3.000"	25%	239 / 730	970	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1048 ft-lb	2'4 3/4"	11362 ft-lb	0.092 (9%)	1.25D+1.5L	L
Unbraced	1048 ft-lb	2'4 3/4"	8295 ft-lb	0.126 (13%)	1.25D+1.5L	L
Shear	760 lb	11 3/4"	4638 lb	0.164 (16%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/12248)	2'4 11/16"	0.147 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.011 (L/4802)	2'4 11/16"	0.147 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.015 (L/3449)	2'4 11/16"	0.220 (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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-9-6	(Span)3-6-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 2-0-14	(Span)3-10-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-10-13		Far Face	32 lb	84 lb	0 lb	0 lb	J1
4	Part. Uniform	1-6-13 to 4-2-13		Far Face	26 PLF	70 PLF	0 PLF	0 PLF	
5	Tie-In	2-0-14 to 4-9-6	(Span) 3-11-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 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

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

This de

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.

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT

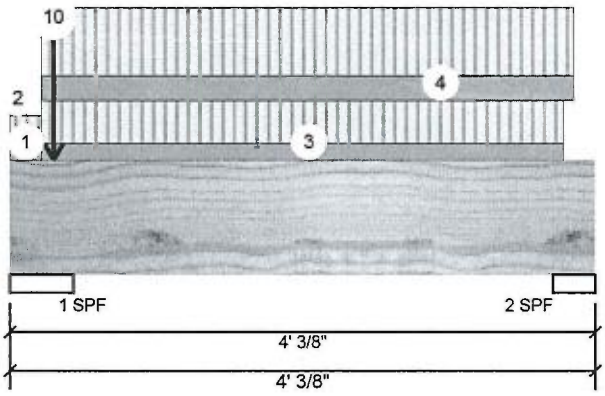
isDesign™

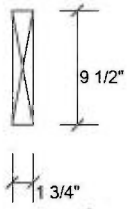
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F1-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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	1058	586	0	0
2	116	51	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	51%	732 / 1587	2319	L	1.25D+1.5L
2 - SPF	3.500"	6%	64 / 174	238	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	197 ft-lb	2'1 1/16"	11362 ft-lb	0.017 (2%)	1.25D+1.5L	L
Unbraced	197 ft-lb	2'1 1/16"	9506 ft-lb	0.021 (2%)	1.25D+1.5L	L
Shear	124 lb	1'2"	4638 lb	0.027 (3%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/63986)	2'1 1/8"	0.114 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/27704)	2'1 1/8"	0.114 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/19333)	2'1 1/8"	0.171 (L/240)	0.010 (1%)	D+L	L

Design Notes

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

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-10	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-1-6		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-2-10 to 3-9-12	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-2-10 to 3-10-10		Top	15 PLF	40 PLF	0 PLF	0 PLF	
5	Point	0-3-10		Top	382 lb	749 lb	0 lb	0 lb	F10 F10
6	Point	0-3-10		Top	1 lb	2 lb	0 lb	0 lb	J1

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This desi

Manufacturer Info
Forex
APA: PR-L318

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

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.

NASCOR

KOTT

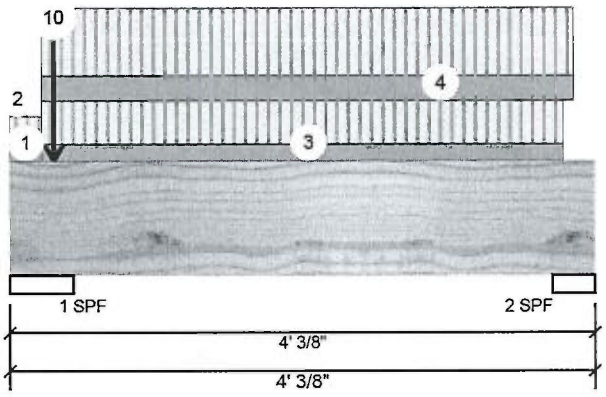
isDesign™

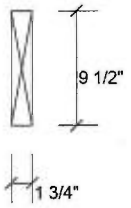
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F1-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	0-3-10		Top	51 lb	129 lb	0 lb	0 lb	J6
8	Point	0-3-10		Top	57 lb	0 lb	0 lb	0 lb	Wall Self Weight
9	Point	0-3-10		Top	21 lb	51 lb	0 lb	0 lb	J6
10	Point	0-3-10		Top	18 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				4 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

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

This design is valid until 7/10/2021

Manufacturer Info

Forex
APA: PR-L318

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

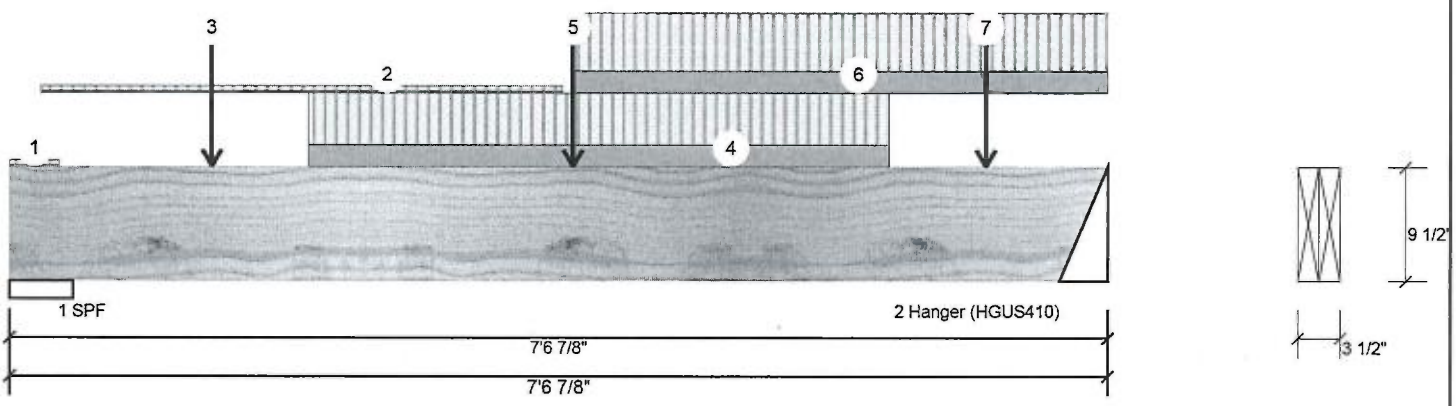
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 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	1147	493	0	0
2	1674	693	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	21%	617 / 1720	2337	L	1.25D+1.5L
2 - Hanger	4.000"	32%	866 / 2512	3378	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5818 ft-lb	3'10 5/8"	22724 ft-lb	0.256 (26%)	1.25D+1.5L	L
Unbraced	5818 ft-lb	3'10 5/8"	21776 ft-lb	0.267 (27%)	1.25D+1.5L	L
Shear	2866 lb	6'6 1/8"	9277 lb	0.309 (31%)	1.25D+1.5L	L
Perm Defl in.	0.024 (L/3517)	3'10 5/8"	0.231 (L/360)	0.100 (10%)	D	Uniform
LL Defl inch	0.057 (L/1467)	3'10 5/8"	0.231 (L/360)	0.250 (25%)	L	L
TL Defl inch	0.080 (L/1035)	3'10 5/8"	0.346 (L/240)	0.230 (23%)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-10 to 3-9-12	(Span)1-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-12		Near Face	107 lb	251 lb	0 lb	0 lb	J2
4	Part. Uniform	2-0-12 to 6-0-12		Near Face	90 PLF	215 PLF	0 PLF	0 PLF	
5	Point	3-10-10		Far Face	196 lb	497 lb	0 lb	0 lb	F1
6	Part. Uniform	3-10-12 to 7-6-14		Top	90 PLF	240 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This d

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.

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT CSI

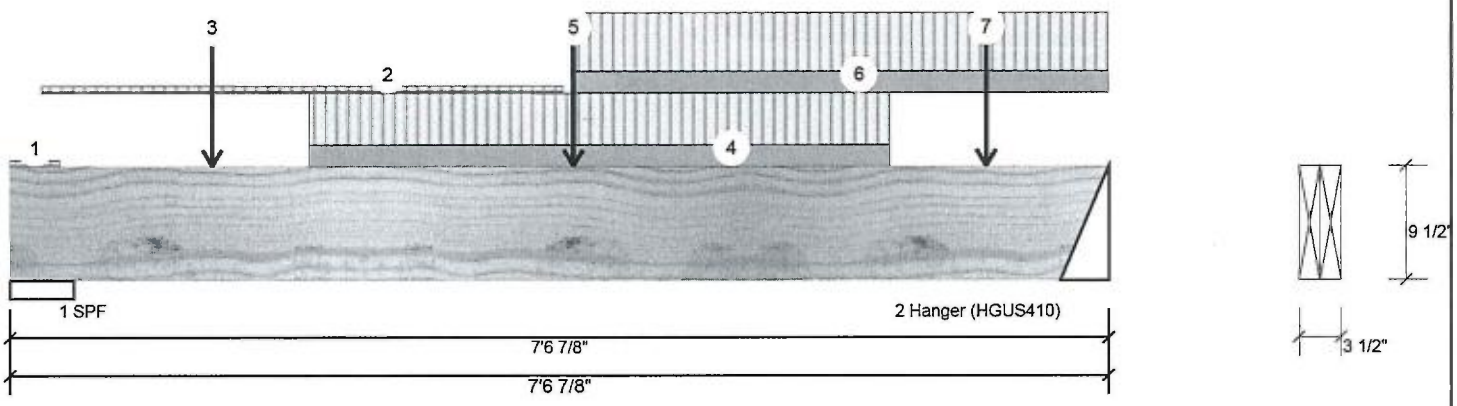
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	6-8-12		Near Face	104 lb	249 lb	0 lb	0 lb	J2
	Self Weight				8 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

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

This design is valid until 7/10/2021

Manufacturer Info

Forex
APA: PR-L318

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

isDesign™

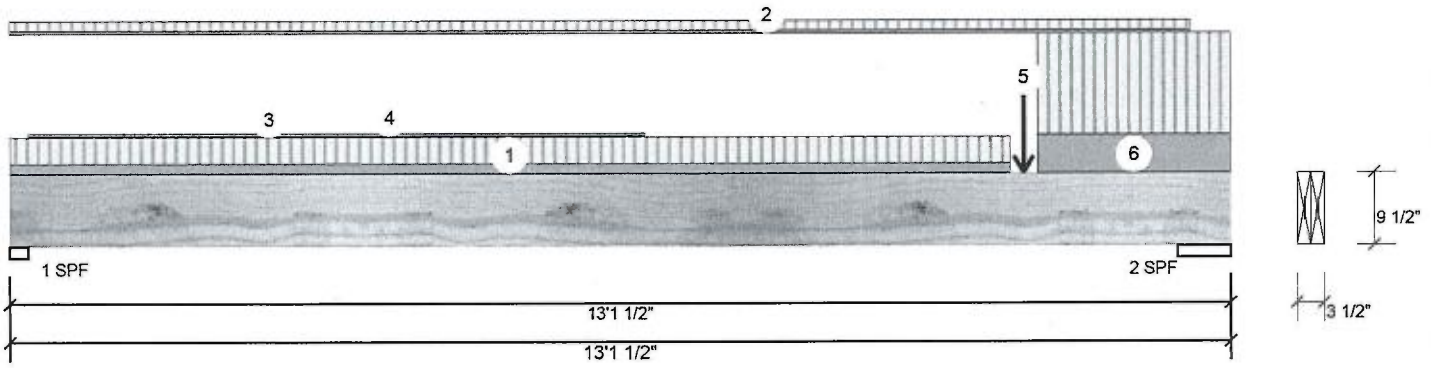
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

Page 1 of 1

F3-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 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	404	223	0	0
2	1729	762	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	17%	279 / 606	885	L	1.25D+1.5L
2 - SPF	6.875"	24%	952 / 2594	3546	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5663 ft-lb	10'10 7/8"	22724 ft-lb	0.249 (25%)	1.25D+1.5L	L
Unbraced	5663 ft-lb	10'10 7/8"	19648 ft-lb	0.288 (29%)	1.25D+1.5L	L
Shear	3325 lb	11'9 7/8"	9277 lb	0.358 (36%)	1.25D+1.5L	L
Perm Defl in.	0.065 (L/2313)	7' 3/16"	0.416 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.134 (L/1118)	7'1 7/8"	0.416 (L/360)	0.320 (32%)	L	L
TL Defl inch	0.199 (L/754)	7'1 3/8"	0.624 (L/240)	0.320 (32%)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-9-2	(Span) 0-11-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-8-6	(Span)0-4-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-7 to 6-10-0		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-7 to 6-10-0		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	10-10-14		Far Face	693 lb	1674 lb	0 lb	0 lb	F2
6	Tie-In	11-0-10 to 13-1-8	(Span)3-10-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 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

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

This desi

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.

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT LSI

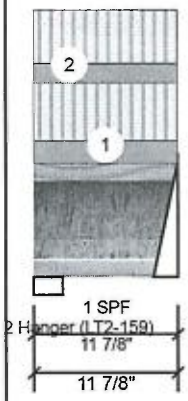
isDesign™

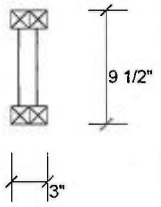
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F4-A NJ 9.500" 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	63	24	0	0
2	59	22	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	5%	29 / 94	124	L	1.25D+1.5L
2 - Hanger	2.000"	4%	28 / 89	116	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17 ft-lb	6 1/8"	7340 ft-lb	0.002 (0%)	1.25D+1.5L	L
Unbraced	17 ft-lb	6 1/8"	7260 ft-lb	0.002 (0%)	1.25D+1.5L	L
Shear	91 lb	10 5/8"	3080 lb	0.030 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

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 flange braced at bearings.
6 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-11-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-11-14	(Span) 2-10-15	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

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. iJoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. iJoist flanges must not be cut or drilled
2. Refer to latest copy of the iJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged iJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing lengths>= 3.5 Inches
7. For flat roofs p… ponding

This design i…

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.

Manufacturer Info
Nascor by Kott

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

NASCOR

KOTT

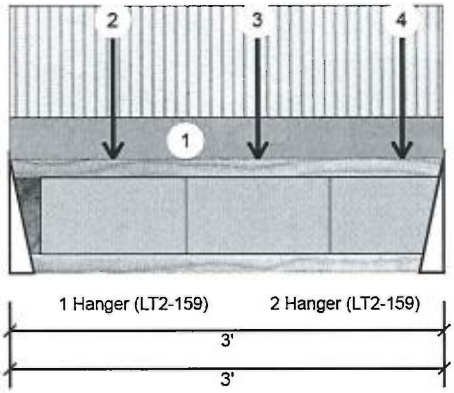
iDesign™

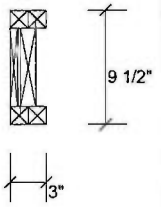
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F5-A NJ 9.500" 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	370	139	0	0
2	437	164	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	28%	173 / 555	728	L	1.25D+1.5L
2 - Hanger	2.000"	33%	205 / 655	860	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	587 ft-lb	1'8 9/16"	7340 ft-lb	0.080 (8%)	1.25D+1.5L	L
Unbraced	587 ft-lb	1'8 9/16"	4678 ft-lb	0.126 (13%)	1.25D+1.5L	L
Shear	852 lb	2'10 3/4"	3080 lb	0.277 (28%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/19612)	1'8 9/16"	0.093 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/7346)	1'8 9/16"	0.093 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.006 (L/5344)	1'8 9/16"	0.140 (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 flange braced at bearings.
6 Bottom flange braced at bearings.

September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-8-9		Near Face	92 lb	246 lb	0 lb	0 lb	J3
3	Point	1-8-9		Near Face	100 lb	267 lb	0 lb	0 lb	J3
4	Point	2-8-9		Near Face	71 lb	189 lb	0 lb	0 lb	J3

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. I-Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. I-Joist flanges must not be cut or drilled
2. Refer to latest copy of the I-Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged I-Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provid... ponding

This design is v...

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.

Manufacturer Info

Nascor by Kott

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

NASCOR

KOTT

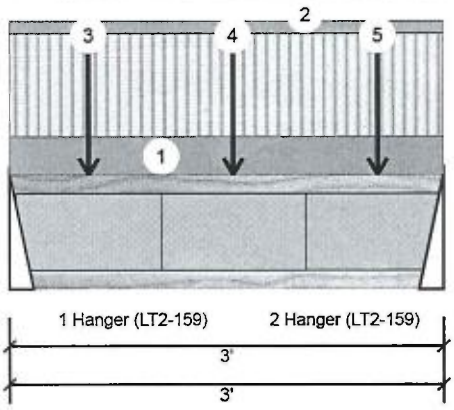
iDesign™

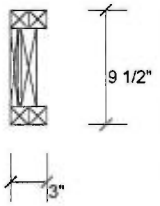
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F5-B NJ 9.500" 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	395	193	0	0
2	410	195	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	32%	241 / 593	834	L	1.25D+1.5L
2 - Hanger	2.000"	33%	244 / 615	860	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	642 ft-lb	1'6 9/16"	7340 ft-lb	0.087 (9%)	1.25D+1.5L	L
Unbraced	642 ft-lb	1'6 9/16"	4678 ft-lb	0.137 (14%)	1.25D+1.5L	L
Shear	852 lb	2'10 3/4"	3080 lb	0.277 (28%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/14913)	1'6 9/16"	0.093 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/7160)	1'6 9/16"	0.093 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.007 (L/4838)	1'6 9/16"	0.140 (L/240)	0.050 (5%)	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 flange braced at bearings.
6 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-0-0		Top	4 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-6-9		Near Face	111 lb	223 lb	0 lb	0 lb	J3
4	Point	1-6-9		Near Face	127 lb	267 lb	0 lb	0 lb	J3
5	Point	2-6-9		Near Face	99 lb	211 lb	0 lb	0 lb	J3

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. iJoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. iJoist flanges must not be cut or drilled
2. Refer to latest copy of the iJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged iJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provid ponding

This design is v

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.

Manufacturer Info
Nascor by Kott

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

NASCOR

KOTT

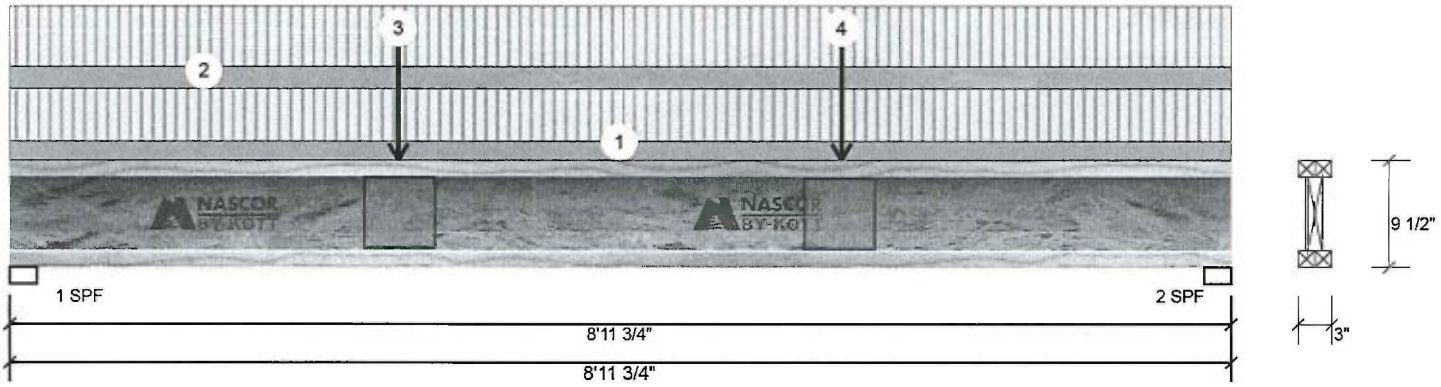
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F6-A NJ 9.500" 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	253	95	0	0
2	253	95	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	19%	118 / 380	498	L	1.25D+1.5L
2 - SPF	2.375"	19%	118 / 380	498	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1123 ft-lb	4'5 7/8"	7340 ft-lb	0.153 (15%)	1.25D+1.5L	L
Unbraced	1123 ft-lb	4'5 7/8"	1134 ft-lb	0.991 (99%)	1.25D+1.5L	L
Shear	487 lb	1 5/8"	3080 lb	0.158 (16%)	1.25D+1.5L	L
Perm Defl in.	0.013 (L/8149)	4'5 7/8"	0.290 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.034 (L/3051)	4'5 7/8"	0.290 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.047 (L/2220)	4'5 7/8"	0.435 (L/240)	0.110 (11%)	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 flange must be laterally braced at a maximum of 5'11" o.c.
5 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-11-12	(Span)1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-11-12	(Span)1-1-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	2-10-6		Near Face	22 lb	59 lb	0 lb	0 lb	F4
4	Point	6-1-6		Near Face	22 lb	59 lb	0 lb	0 lb	F4

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. lJoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. lJoist flanges must not be cut or drilled
2. Refer to latest copy of the lJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged lJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs p... ponding

This design ...

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.

Manufacturer Info

Nascor by Kott

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

NASCOR KOTT

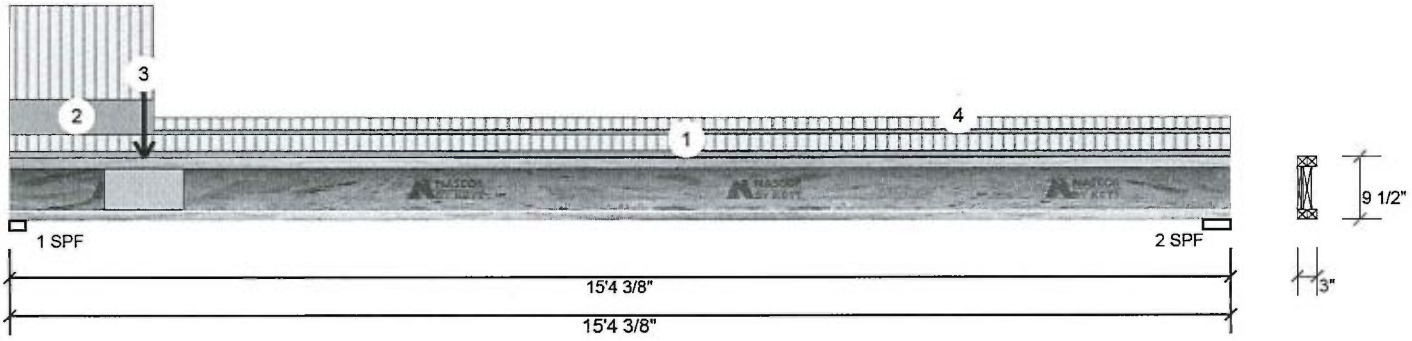
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F7-A NJ 9.500" 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	642	241	0	0
2	206	77	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	47%	301 / 962	1263	L	1.25D+1.5L
2 - SPF	4.125"	13%	97 / 309	406	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1980 ft-lb	5' 11/16"	7340 ft-lb	0.270 (27%)	1.25D+1.5L	L
Unbraced	1980 ft-lb	5' 11/16"	1987 ft-lb	0.996 (100%)	1.25D+1.5L	L
Shear	1243 lb	1 5/8"	3080 lb	0.404 (40%)	1.25D+1.5L	L
Perm Defl in.	0.059 (L/3063)	7' 11/16"	0.498 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.156 (L/1149)	7' 11/16"	0.498 (L/360)	0.310 (31%)	L	L
TL Defl inch	0.215 (L/836)	7' 11/16"	0.747 (L/240)	0.290 (29%)	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 flange must be laterally braced at a maximum of 4'8" o.c.
5 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-4-6	(Span)0-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Near Face	164 lb	437 lb	0 lb	0 lb	F5
4	Tie-In	1-9-14 to 15-4-6	(Span)0-4-15	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

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. Ijoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Ijoist flanges must not be cut or drilled
2. Refer to latest copy of the Ijoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Ijoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provi... ponding

This design is v...

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.

Manufacturer Info
Nascor by Kott

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

NASCOR

KOTT

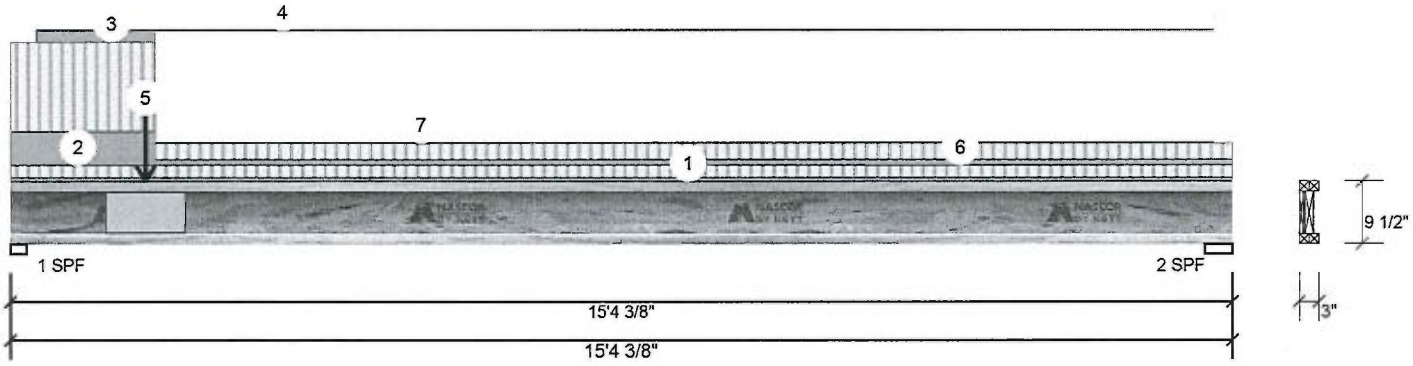
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F7-C NJ 9.500" 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	612	291	0	0
2	203	96	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	48%	363 / 917	1281	L	1.25D+1.5L
2 - SPF	4.125"	14%	120 / 305	425	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2042 ft-lb	5'2 1/2"	7340 ft-lb	0.278 (28%)	1.25D+1.5L	L
Unbraced	2042 ft-lb	5'2 1/2"	2046 ft-lb	0.998 (100%)	1.25D+1.5L	L
Shear	1261 lb	1 5/8"	3080 lb	0.410 (41%)	1.25D+1.5L	L
Perm Defl in.	0.072 (L/2480)	7' 7/8"	0.498 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.152 (L/1182)	7'1"	0.498 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.224 (L/800)	7'1"	0.747 (L/240)	0.300 (30%)	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 flange must be laterally braced at a maximum of 4'8" o.c.
5 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-4-6	(Span)0-5-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-3-14 to 1-9-14		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-3-14 to 15-1-8		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-6		Near Face	195 lb	410 lb	0 lb	0 lb	F5
6	Tie-In	1-9-14 to 15-4-6	(Span)0-6-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-9-14 to 15-1-9		Top	1 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

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. I-Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. I-Joist flanges must not be cut or drilled
2. Refer to latest copy of the I-Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged I-Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provid... ponding

This design is v...

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.

Manufacturer Info
Nascor by Kott

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

NASCOR

KOTT CSI

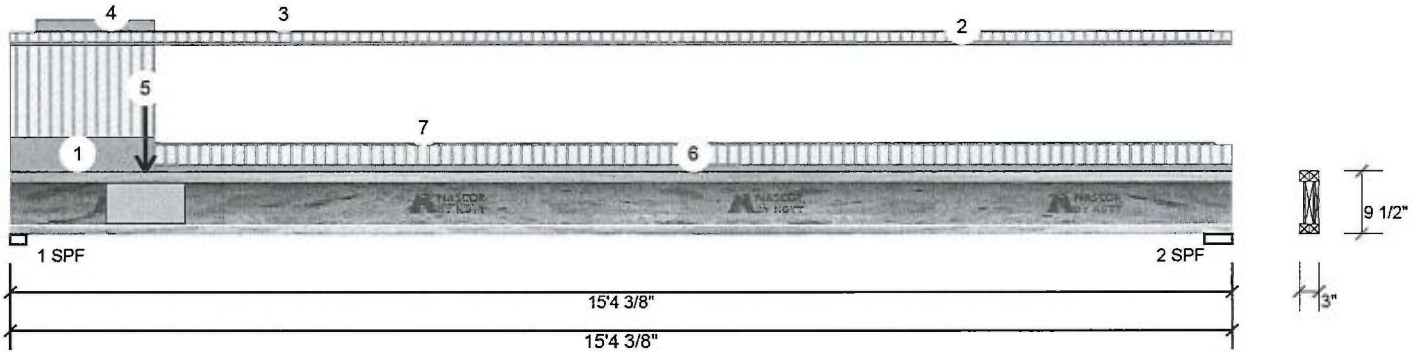
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F7-D NJ 9.500" 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	595	294	0	0
2	201	103	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	47%	367 / 892	1259	L	1.25D+1.5L
2 - SPF	4.125"	14%	129 / 302	431	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2044 ft-lb	5'4 3/16"	7340 ft-lb	0.278 (28%)	1.25D+1.5L	L
Unbraced	2044 ft-lb	5'4 3/16"	2046 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	1240 lb	1 5/8"	3080 lb	0.403 (40%)	1.25D+1.5L	L
Perm Defl in.	0.076 (L/2357)	7'1 3/8"	0.498 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.149 (L/1201)	7'1 1/8"	0.498 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.225 (L/796)	7'1 3/16"	0.747 (L/240)	0.300 (30%)	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 flange must be laterally braced at a maximum of 4'8" o.c.
5 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-4-6	(Span)0-3-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-3-14 to 15-1-10		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-3-14 to 1-9-14		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-6		Far Face	193 lb	395 lb	0 lb	0 lb	F5
6	Tie-In	1-9-14 to 15-4-6	(Span)0-8-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-9-14 to 15-1-10		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

Notes

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

Lumber

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

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provid... ponding

This design is v...

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.

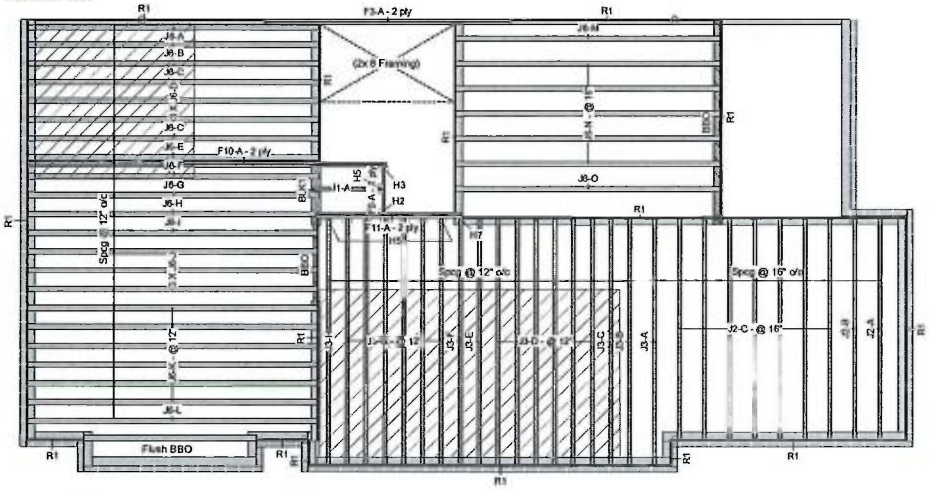
Manufacturer Info
Nascor by Kott

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

NASCOR

KOTT

Second Floor



This certification is to confirm that:
1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor 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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083568
PROVINCE OF ONTARIO

September 13, 2018

Legend

◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 9.5
	NJ60U 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -14056-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F10	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	20-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J8	NJ60U	3.5	9.5			29	16-0-0
J3	NJH	2.5	9.5			18	14-0-0
J2	NJH	2.5	9.5			9	12-0-0
J1	NJH	2.5	9.5			1	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			14	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	2-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H2	1	HUS1.81/10			30 16d	10 16d
H3	1	HUCQ1.81/9-SDS				
H5	8	LT259			4 10dx1 1/2	2 10dx1 1/2
H7	1	LT259				

NOTES:

1. Framer to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. 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.
7. Load transfer blocks to be installed under all point loads.
8. 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"x 4" 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 and structural drawings. Project Engineer to review and approve the deviation prior to construction.

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.
64 Jardin Dr., Suite 3A, Vaughan, ON
Date: Rev.3; Aug.30,2018
Project No: 18-24
Model: Clover 11A

NASCOR

Layout Name
CLOVER 11A-1

Design Method
LSD

Description
MINNISALE HOMES
BRAMPTON, ONT.

Created
July 03, 2018

Builder
GREENPARK

Sales Rep
RM

Designer
RCO

Shipping

Project

Builder's Project

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

Job Path
D:\Users\rochaville\WORK FROM HOME\GREENPARK\MINNISALE HOMES\CLOVER 11A\FLOOR\REV\CLOVER 11A.lsl

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	SPF Plywood
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

KOTT

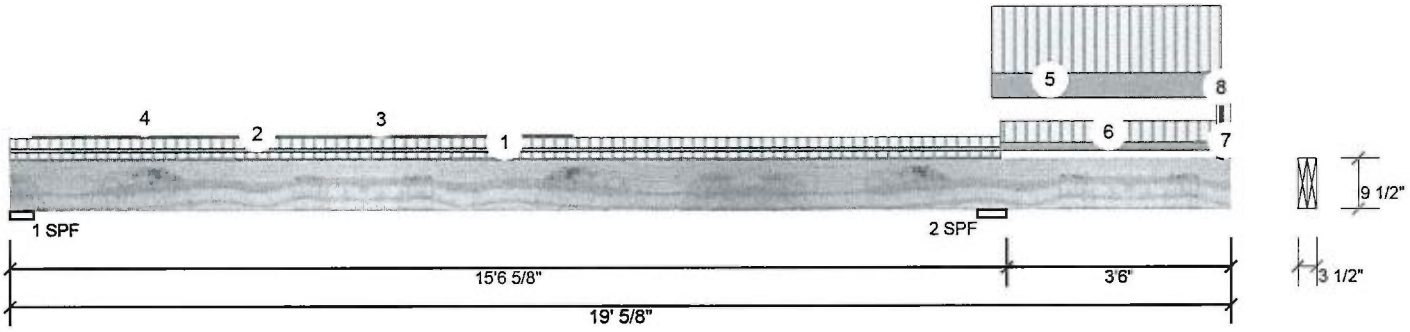
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F10-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 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	83	105	0	0
2	749	382	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	4%	131 / 234	365 (-7)	L_	1.25D+1.5L
2 - SPF	5.500"	14%	478 / 1124	1602	LL	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2241 ft-lb	15'6 5/8"	22724 ft-lb	0.099 (10%)	1.25D+1.5L	_L
Unbraced	-2241 ft-lb	15'6 5/8"	18268 ft-lb	0.123 (12%)	1.25D+1.5L	_L
Pos Moment	1168 ft-lb	6'11 9/16"	20906 ft-lb	0.056 (6%)	1.25D+1.5L	L_
Unbraced	1168 ft-lb	6'11 9/16"	18123 ft-lb	0.064 (6%)	1.25D+1.5L	L_
Shear	855 lb	16'4 1/8"	9277 lb	0.092 (9%)	1.25D+1.5L	_L
Perm Defl in.	0.018 (L/9997)	6'7 11/16"	0.501 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.055 (L/3278)	8'11 3/4"	0.501 (L/360)	0.110 (11%)	L	_L
TL Defl inch	0.065 (L/2759)	7'5 1/8"	0.751 (L/240)	0.090 (9%)	D+L	L_
LL Cant	0.084 (2L/995)	Rt Cant	0.200 (2L/480)	0.422 (42%)	L	_L
TL Cant	0.092 (2L/911)	Rt Cant	0.300 (2L/360)	0.307 (31%)	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 Tie-down connection required at bearing 1 for uplift 7 lb (Combination 0.9D+1.5L, Load Case _L).
5 Top braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on full section width.

September 13, 2018

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

This design i

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.

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT

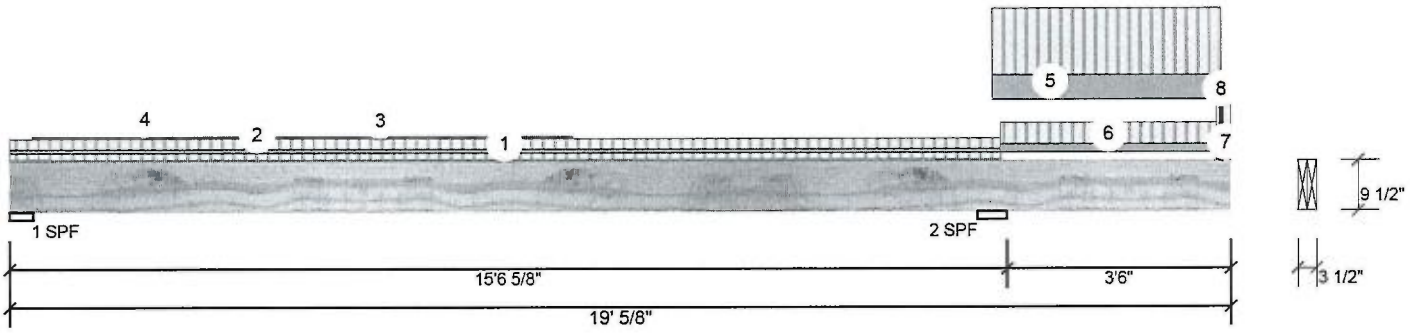
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F10-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 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 15-5-8	(Span)0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-5-6	(Span)0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-5 to 8-9-7		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-5 to 8-9-8		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	15-3-14 to 18-10-14		Top	30 PLF	80 PLF	0 PLF	0 PLF	
6	Tie-In	15-5-6 to 18-10-0	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Tie-In	18-10-0 to 19-0-10	(Span)2-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Point	18-10-14		Near Face	56 lb	138 lb	0 lb	0 lb	F9
	Self Weight				8 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

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

This design is valid until 7/10/2021

Manufacturer Info

Forex
APA: PR-L318

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

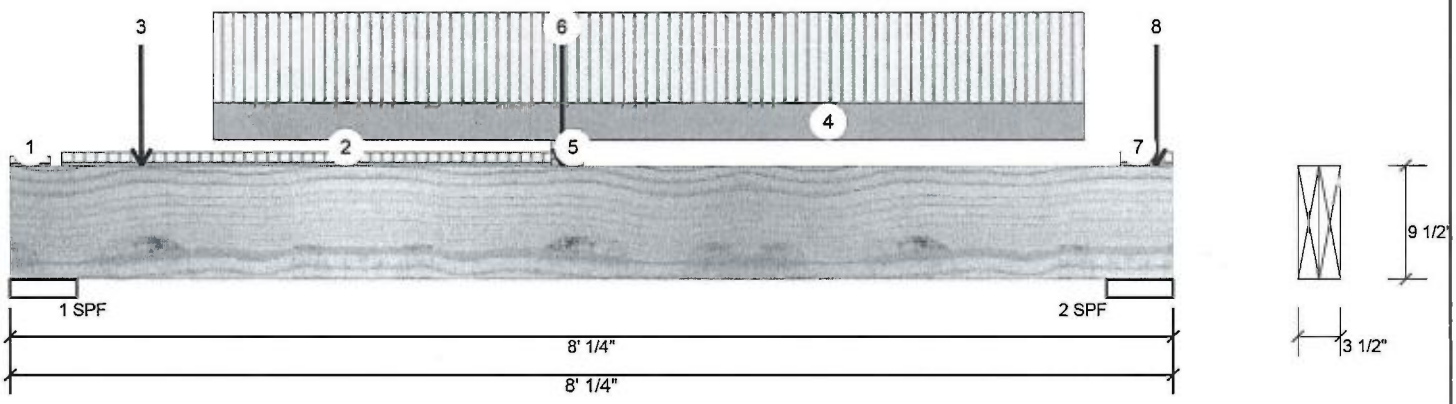
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 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	1033	462	0	0
2	1050	472	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	18%	578 / 1550	2127	L	1.25D+1.5L
2 - SPF	5.500"	18%	590 / 1576	2166	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4121 ft-lb	3'9 3/4"	22724 ft-lb	0.181 (18%)	1.25D+1.5L	L
Unbraced	4121 ft-lb	3'9 3/4"	21692 ft-lb	0.190 (19%)	1.25D+1.5L	L
Shear	2360 lb	1'2 1/4"	9277 lb	0.254 (25%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/4469)	3'11 9/16"	0.241 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.044 (L/1986)	3'11 1/2"	0.241 (L/360)	0.180 (18%)	L	L
TL Defl inch	0.063 (L/1375)	3'11 1/2"	0.361 (L/240)	0.170 (17%)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-3-6	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-4-4 to 3-8-14	(Span)1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-10-14		Near Face	86 lb	204 lb	0 lb	0 lb	J3
4	Part. Uniform	1-4-14 to 7-4-14		Near Face	109 PLF	258 PLF	0 PLF	0 PLF	
5	Tie-In	3-8-14 to 3-11-8	(Span)2-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	3-9-12		Far Face	55 lb	134 lb	0 lb	0 lb	F9

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This desig

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.

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT

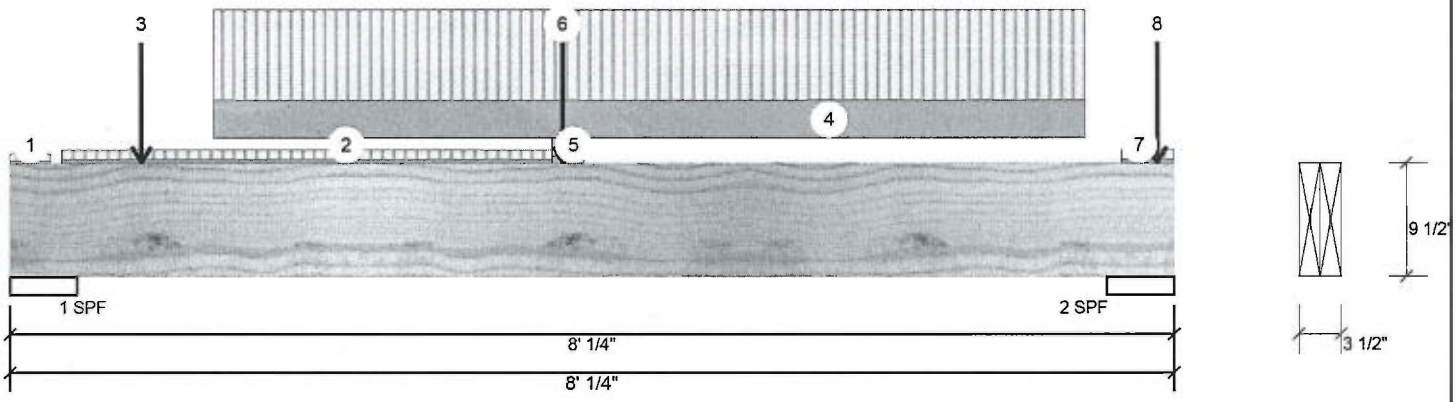
isDesign™

Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	7-7-14 to 8-0-4	(Span)1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Point	7-10-14		Near Face	33 lb	77 lb	0 lb	0 lb	J3
	Self Weight				8 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

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

This design is valid until 7/10/2021

Manufacturer Info

Forex
APA: PR-L318

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

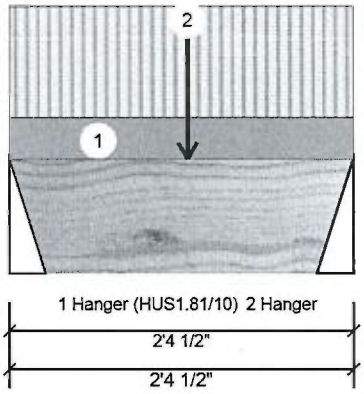
isDesign™

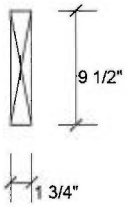
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: RCO
Job Name: CLOVER 11A-1
Project #:

F9-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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	134	55	0	0
2	138	56	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	7%	68 / 201	269	L	1.25D+1.5L
2 - Hanger	3.000"	7%	70 / 207	278	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	167 ft-lb	1'2 13/16"	11362 ft-lb	0.015 (1%)	1.25D+1.5L	L
Unbraced	167 ft-lb	1'2 13/16"	10730 ft-lb	0.016 (2%)	1.25D+1.5L	L
Shear	127 lb	1'4 3/4"	4638 lb	0.027 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/30185)	1'2 13/16"	0.067 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/21630)	1'2 13/16"	0.100 (L/240)	0.010 (1%)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-4-8	(Span)3-9-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-2-13		Far Face	34 lb	92 lb	0 lb	0 lb	J1
	Self Weight				4 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

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

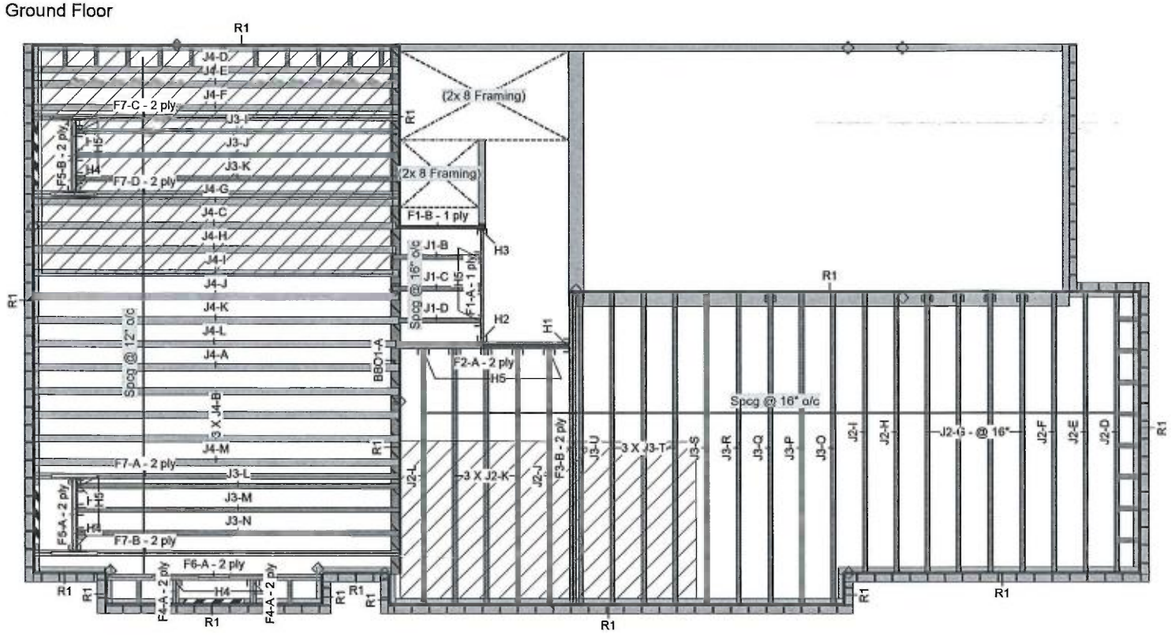
Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400

This **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.**

NASCOR

KOTT

Ground Floor



This certification is to confirm that:
1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor 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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

September 13, 2018

CITY OF BRAMPTON
BUILDING DIVISION
REVIEWED
DEC 14 2018
BY
MARK DERKSEN

All work shall conform to the Ontario Building Code O. Reg. 332/12 as amended

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

Legend

◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 9.5
	NJ 9.5
	NJ40U 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -14056-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

Ground Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	6-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F7	NJ	1.5	9.5	4	2	8	16-0-0
F6	NJ	1.5	9.5	1	2	2	10-0-0
F5	NJ	1.5	9.5	2	2	4	4-0-0
F4	NJ	1.5	9.5	2	2	4	2-0-0
J4	NJ40U	3.5	9.5			15	16-0-0
J3	NJH	2.5	9.5			15	14-0-0
J2	NJH	2.5	9.5			14	12-0-0
J1	NJH	2.5	9.5			3	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			12	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	18-0-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	1	HGUS410			46 16d	16 16d
H2	1	HUS1.81/10			30 16d	10 16d
H3	1	HUCQ1.81/9-SDS				
H4	6	LT2-159			4 10dx1 1/2	2 10dx1 1/2
H5	14	LT259			4 10dx1 1/2	2 10dx1 1/2

NOTES:

1. Framer to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. 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.
7. Load transfer blocks to be installed under all point loads.
8. 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"x 4" 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 addtional dead load of 5 PSF

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.
64 Jardin Dr., Suite 3A, Vaughan, ON
Date: Rev.3; Aug.30,2018
Project No: 18-24
Model: Clover 11A

NASCOR

Layout Name
CLOVER 11A-1

Design Method
LSD

Description
MINNISALE HOMES
BRAMPTON, ONT.

Created
July 03, 2018

Builder
GREENPARK

Sales Rep
RM

Designer
RCO

Shipping

Project

Builder's Project

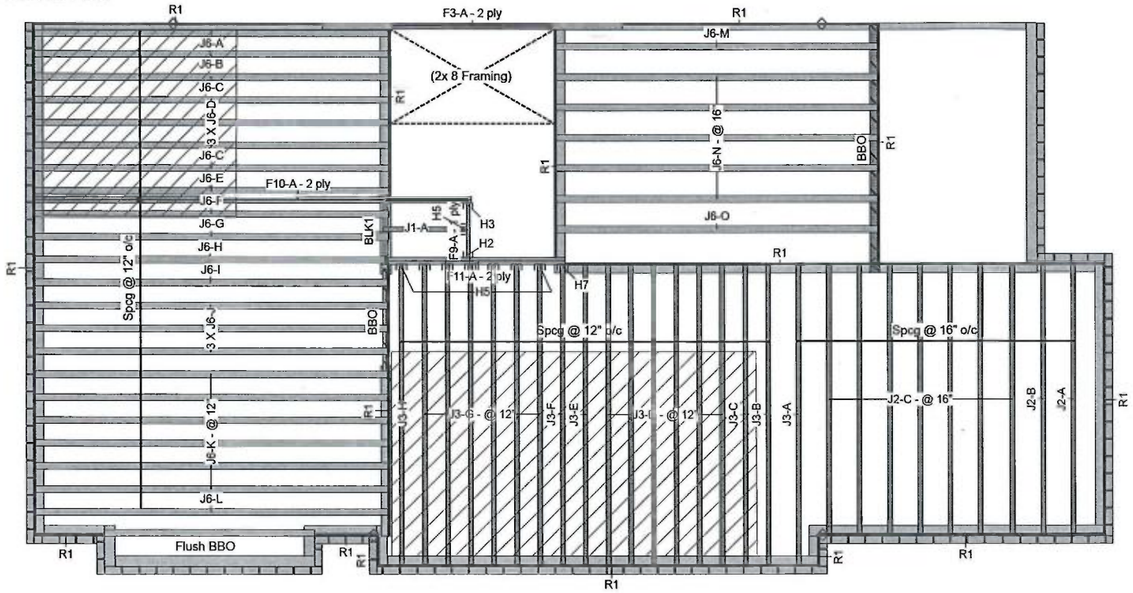
Kott Lumber Company
14 Anderson Blvd
Stouffville, Ontario
Canada
L4A 7X4
905-642-4400

Job Path
D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\CLOVER 11A\FLOOR\REV \CLOVER 11A.isl

Ground Floor

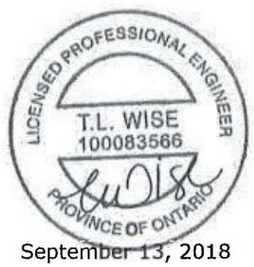
Design Method	LSD
Building Code	NBCC 2010 / OBC 2012
Floor	
Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	SPF Plywood
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

Second Floor



This certification is to confirm that:
1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor 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.



September 13, 2018

Legend

◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 9.5
	NJ60U 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -14056-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F10	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	20-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J6	NJ60U	3.5	9.5			29	16-0-0
J3	NJH	2.5	9.5			18	14-0-0
J2	NJH	2.5	9.5			9	12-0-0
J1	NJH	2.5	9.5			1	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			14	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	2-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H2	1	HUS1.81/10			30 16d	10 16d
H3	1	HUCQ1.81/9-SDS				
H5	8	LT259			4 10dx1 1/2	2 10dx1 1/2
H7	1	LT259				

NOTES:

1. Framer to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. 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.
7. Load transfer blocks to be installed under all point loads.
8. 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"x 4" 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 addtional dead load of 5 PSF

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.
64 Jardin Dr., Suite 3A, Vaughan, ON
Date: Rev.3; Aug.30,2018
Project No: 18-24
Model: Clover 11A

NASCOR

Layout Name
CLOVER 11A-1

Design Method
LSD

Description
MINNISALE HOMES
BRAMPTON, ONT.

Created
July 03, 2018

Builder
GREENPARK

Sales Rep
RM

Designer
RCO

Shipping

Project

Builder's Project

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

Job Path
D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\CLOVER 11A\FLOOR\REV \CLOVER 11A.isl

Second Floor

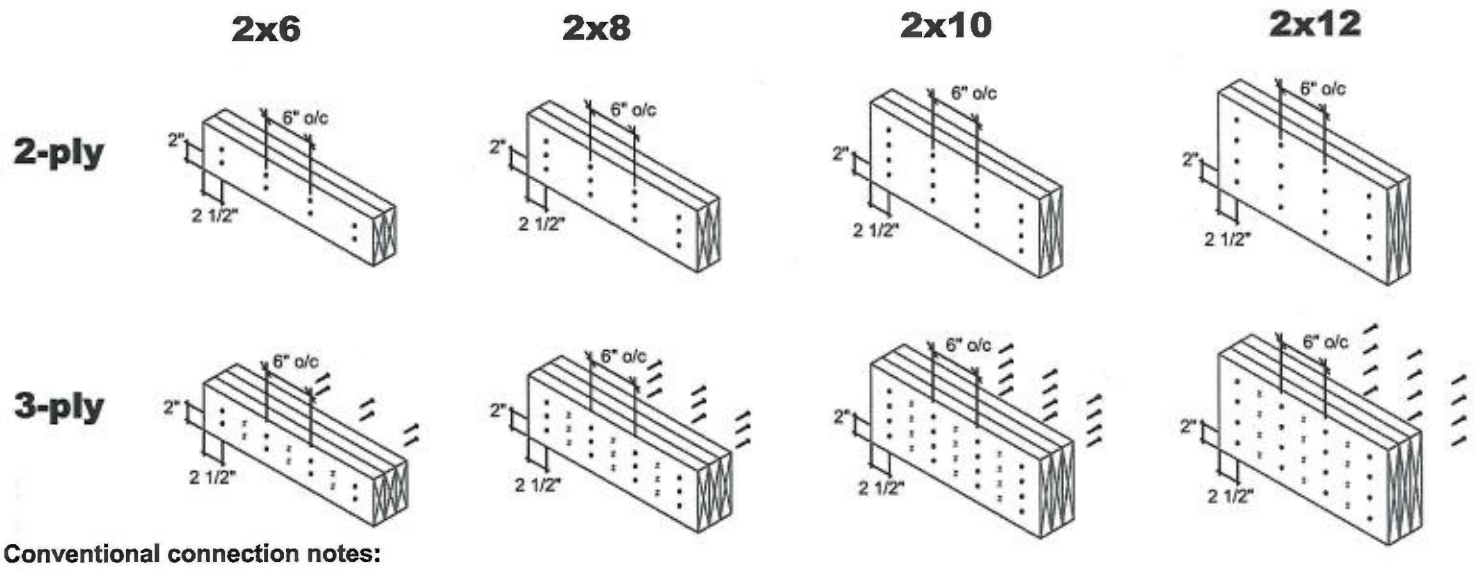
Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

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	SPF Plywood
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

MULTIPLE MEMBER CONNECTIONS

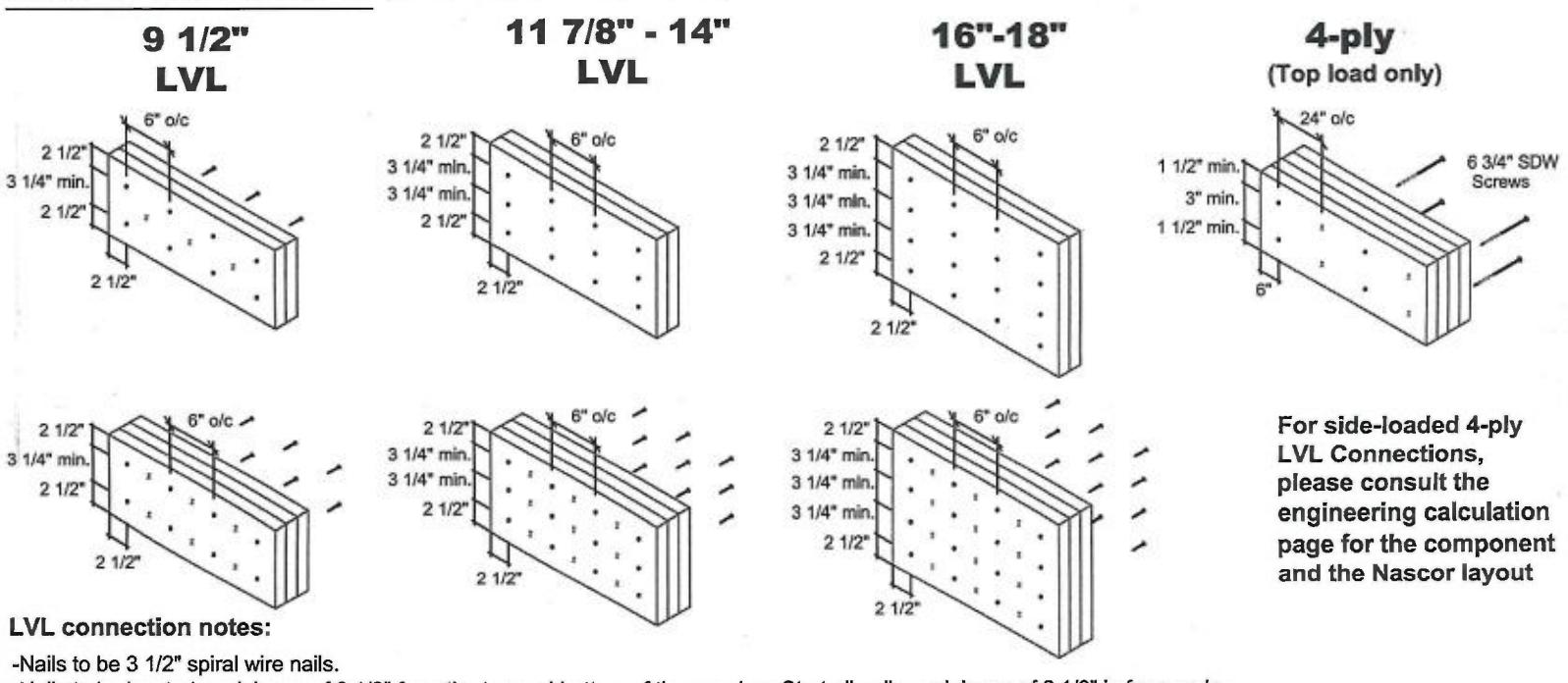
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

-Nails to be 3" 10d spiral wire nails.
-Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)

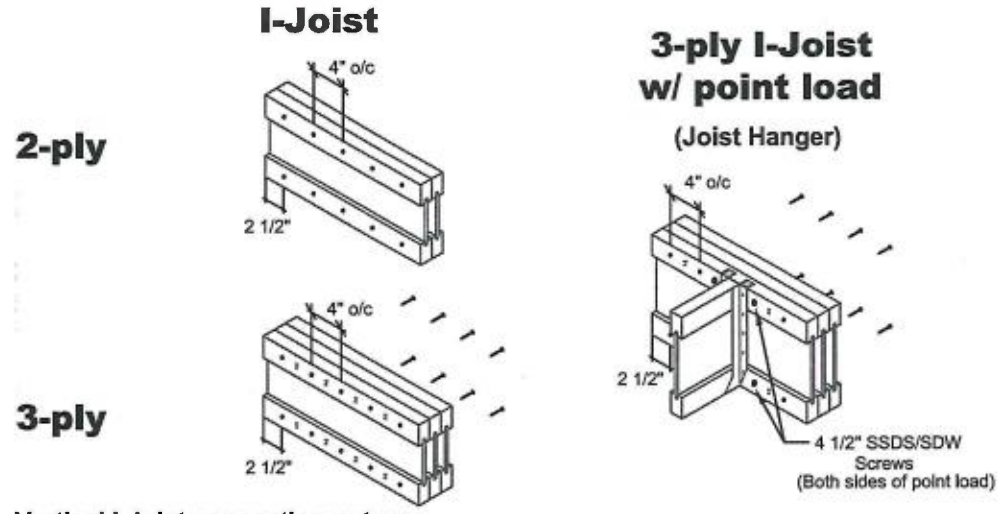


For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

LVL connection notes:

-Nails to be 3 1/2" spiral wire nails.
-Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in 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.

Vertical I-Joist Connections (for uniform distributed loads)



Vertical I-Joist connection notes:

-Nails to be 3" spiral wire nails.
-Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

MULTI -PLY CONNECTION DETAILS	KOTT 3228 Moodie Drive Ottawa, ON K2H 7V1 Ph: 613-838-2775 Fx: 613-838-4751
Date: November 30, 2016	
Scale: NTS	