

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.

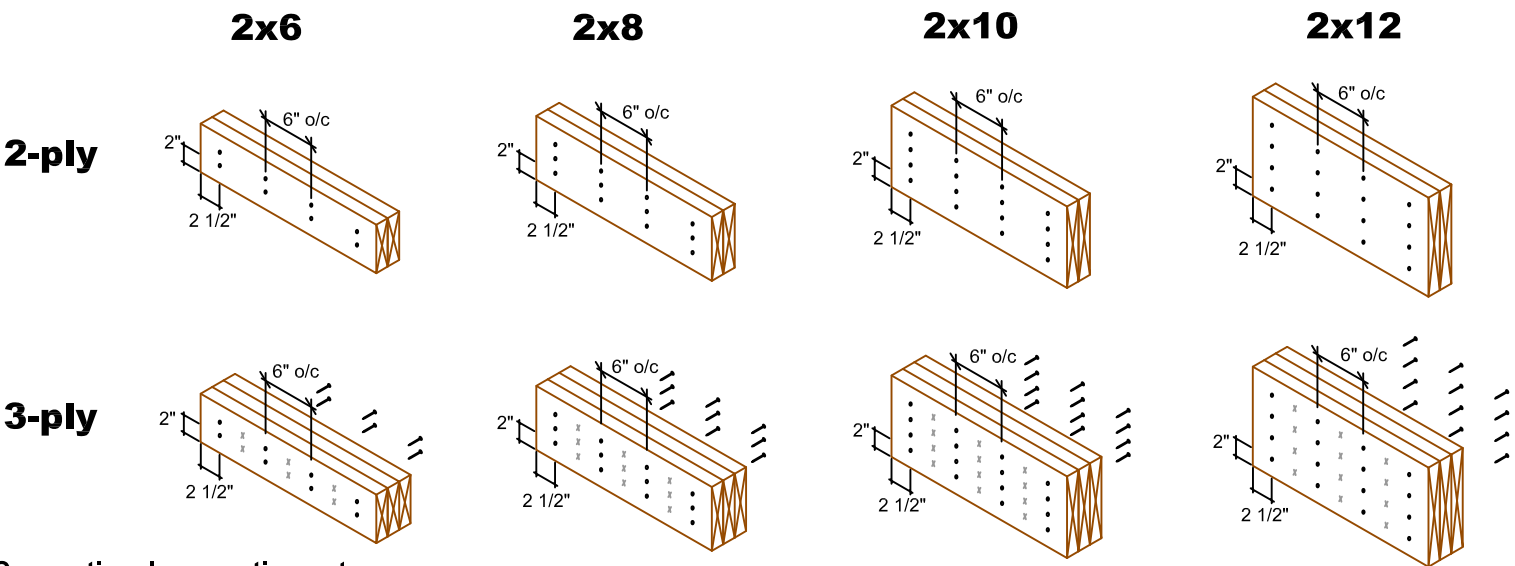
HANDLING AND INSTALLATION

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

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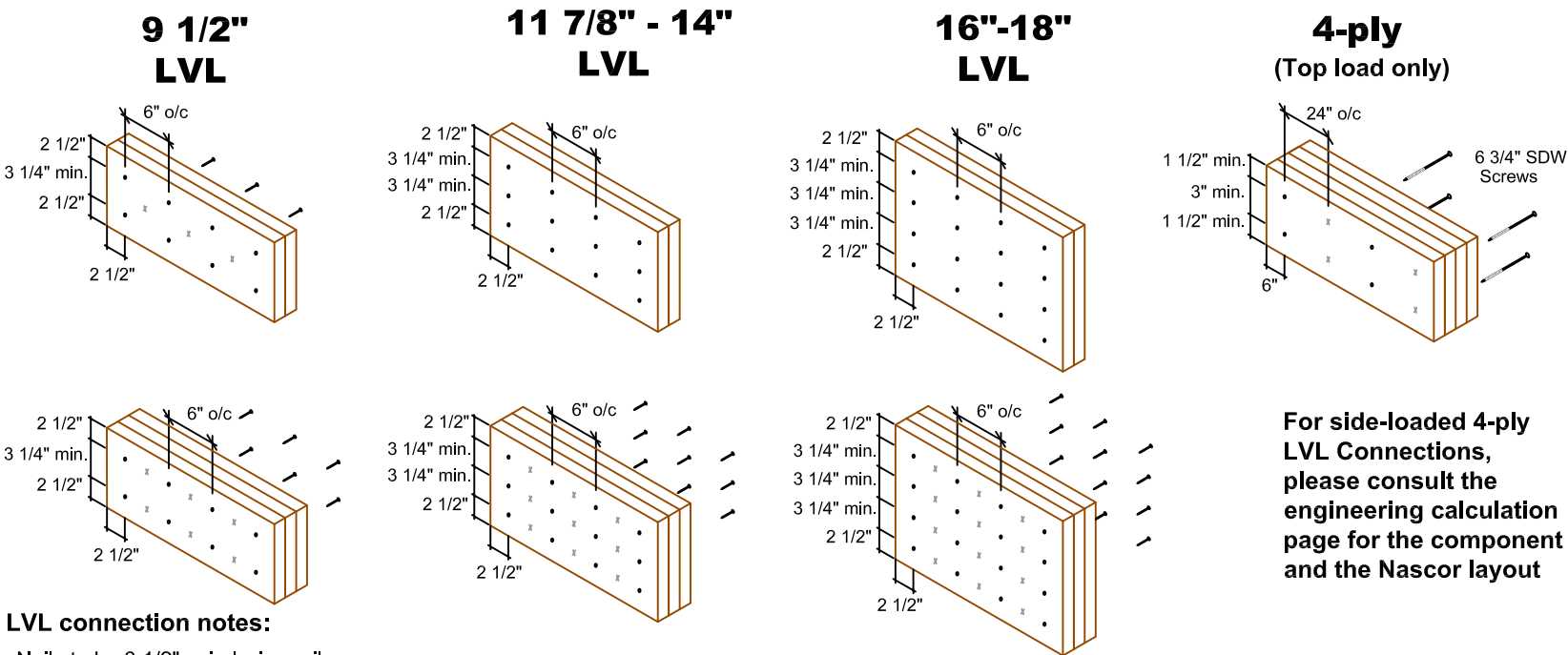
MULTIPLE MEMBER CONNECTIONS

Conventional Connections (for uniform distributed loads)



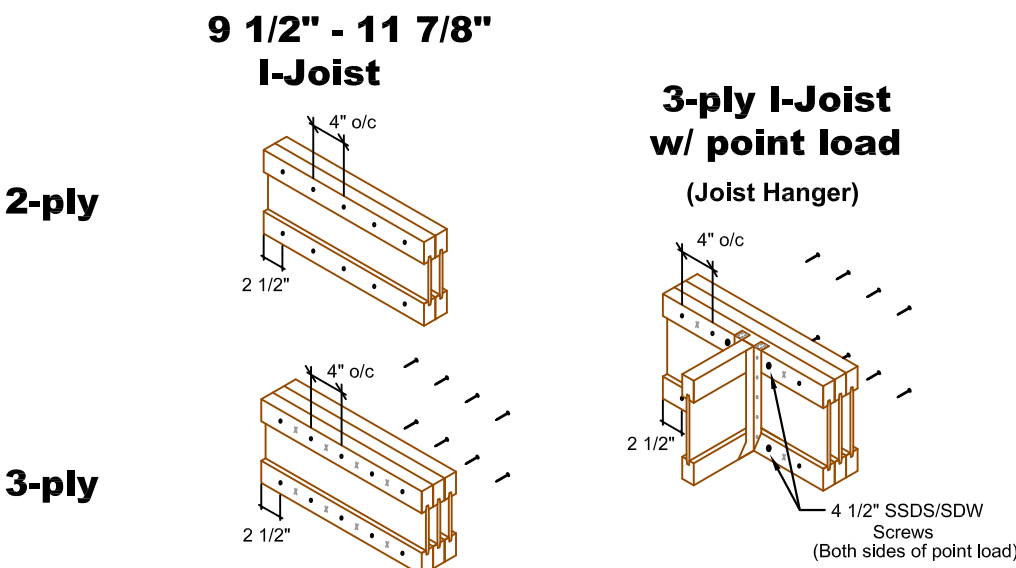
- Conventional connection notes:**
- Nails to be 3" 10d spiral wire nails.
 - Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
 - Number of rows and spacing as per details shown, unless noted otherwise.
 - "X" represents nail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

LVL Connections (for uniform distributed loads)



- 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.

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**MULTI -PLY
CONNECTION
DETAILS**

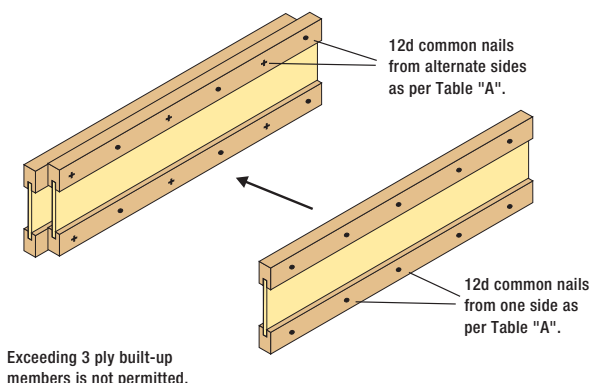
Date: November 30, 2016

Scale: NTS

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

MULTIPLE PLIES

NJ SERIES



NJH / NJU SERIES

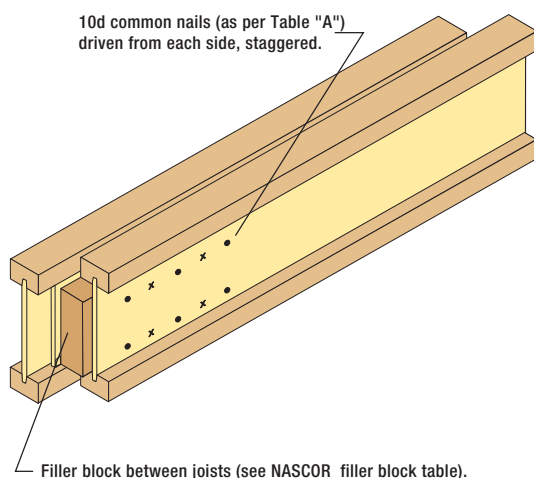


TABLE A

NAIL SPACING	TRANSFER LOAD
16" o/c	135 PLF
12" o/c	181 PLF
8" o/c	271 PLF
6" o/c	362 PLF
	***UNFACTORED

ADHESIVE

A 1/4" CONTINUOUS BEAD OF ADHESIVE MEETING APA AFG-01 APPLIED TO THE TOP AND BOTTOM CHORD PROVIDES 300 PLF (UNFACTORED) OF TRANSFER CAPACITY.

BACKER AND FILLER BLOCK REQUIREMENTS

JOIST TYPE	BACKER BLOCK THICKNESS	BACKER BLOCK DEPTH	FILLER BLOCK THICKNESS	FILLER BLOCK DEPTH
NJ925	1/2"	4-1/8"	1-1/8"	4-1/8"
NJ10	1/2"	4-3/8"	1-1/8"	4-3/8"
NJ12	1/2"	6-3/4"	1-1/8"	6-3/4"
NJH10	1"	6-3/8"	2-1/8"	5-1/2"
NJH12	1"	8-3/4"	2-1/8"	7-1/4"
NJH14	1"	10-7/8"	2-1/8"	9-1/4"
NJH16	1"	12-7/8"	2-1/8"	11-1/4"
NJU10	1-1/2"	6-3/8"	3"	5-1/2"
NJU12	1-1/2"	8-3/4"	3"	7-1/4"
NJU14	1-1/2"	10-7/8"	3"	9-1/4"
NJU16	1-1/2"	12-7/8"	3"	11-1/4"

NOTES ON LOAD TRANSFERS

SIDE LOADED BEAMS

- BEAMS THAT HAVE LOADS WHERE 60% OR MORE OF THE LOAD IS FROM ONE SIDE SHALL BE CONSIDERED TO BE LOADED FROM ONE SIDE ONLY.
- FASTENERS, ADHESIVE OR FASTENERS & ADHESIVE MUST BE ABLE TO TRANSFER:

LOAD FROM ONE SIDE ONLY

75% OF THE TOTAL LOAD FOR 2 PLY MEMBERS
84% OF THE TOTAL LOAD FOR 3 PLY MEMBERS

LOAD FROM BOTH SIDES

45% OF THE TOTAL LOAD FOR 2 PLY MEMBERS
50% OF THE TOTAL LOAD FOR 3 PLY MEMBERS

EXAMPLE

DETERMINE THE CONNECTION REQUIRED FOR A 2 PLY NJ10 THAT CARRIES A 600 PLF (UNFACTORED) LOAD FROM ONE SIDE ONLY.

STEP 1

FOR A 2 PLY BEAM THE CONNECTION MUST BE ABLE TO TRANSFER 75% OF THE TOTAL LOAD.
 $75\% \times 600 \text{ PLF} = 450 \text{ PLF (UNFACTORED)}$

STEP 2

TABLE A SHOWS THAT NAILS ALONE CAN NOT TRANSFER THE LOAD.
NAILS @ 6" o.c. = 362 PLF < 450 PLF (UNFACTORED)
THEREFORE, ADHESIVE IS REQUIRED.

STEP 3

DETERMINE THE REQUIRED NAIL SPACING. ADHESIVE ALONE TRANSFERS 300 PLF (UNFACTORED). NAILS MUST TRANSFER:
 $450 \text{ PLF} - 300 \text{ PLF} = 150 \text{ PLF (UNFACTORED)}$

FROM TABLE A, NAILS @ 12" O.C. CAN TRANSFER
181 PLF > 150 PLF (UNFACTORED)

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----- Floor Framing Material -----			
Type	Qty.	Product	Length
J1	18	NJH12	18' 0"
J2	4	NJH12	14' 0"
J3	2	NJH12	12' 0"
J4	5	NJH12	10' 0"
J5	2	NJH12	8' 0"
J6	18	NJH12	2' 0"
J7	10	NJ40U12	20' 0"
J8	2	NJ40U12	18' 0"
J9	24	NJ60H12	18' 0"
G1	2	NJ12	4' 0"
G2	1	NJ12	2' 0"
G3	1	NJ12	2' 0"
G4	2	NJ12	4' 0"
G5	1	1 3/4x11 7/8 West Fraser 2.0E-	4' 0"
G6	1	1 3/4x11 7/8 West Fraser 2.0E-	4' 0"
G7	1	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G8	1	1 3/4x11 7/8 West Fraser 2.0E-	18' 0"
G9	1	1 3/4x11 7/8 West Fraser 2.0E-	10' 0"
G10	1	NJ12	2' 0"
G11	1	NJ12	2' 0"
G12	1	NJ12	2' 0"
G13	1	NJ12	2' 0"
G14	2	NJ12	4' 0"
G15	2	NJ12	20' 0"
G16	2	NJ12	18' 0"
G17	2	NJ12	18' 0"
G18	2	NJ12	18' 0"
G19	2	NJ12	20' 0"
G20	2	NJ12	20' 0"
G21	2	1 3/4x11 7/8 West Fraser 2.0E-	14' 0"
R1	18	11 7/8" RIMBOARD	12' 0"

All product names are trademarks of their respective owners

DESIGN ASSUMPTIONS
=====

Loads:(un-factored)
T/C Live: 40 psf B/C Live: 0 psf
T/C Dead: 15 psf B/C Dead: 0 psf
Load Case: Live
Deflection Criteria:
L/480 Live L/360 Total
Building Code: OBC-2012 (Limit States Design)
Building Type: Residential
Importance Category: Normal (Part 9)
Design assumes top edge continuously braced,
and bottom edge unbraced.
Joist Design Includes CCMC Vibration Check
Subfloor: 3/4" OSB Glued and Nailed
Ceiling: (None)
Blocking: (None)

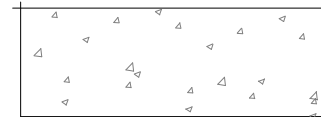
All Loads are UN-FACTORED Loads

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.

--- Connector List ---

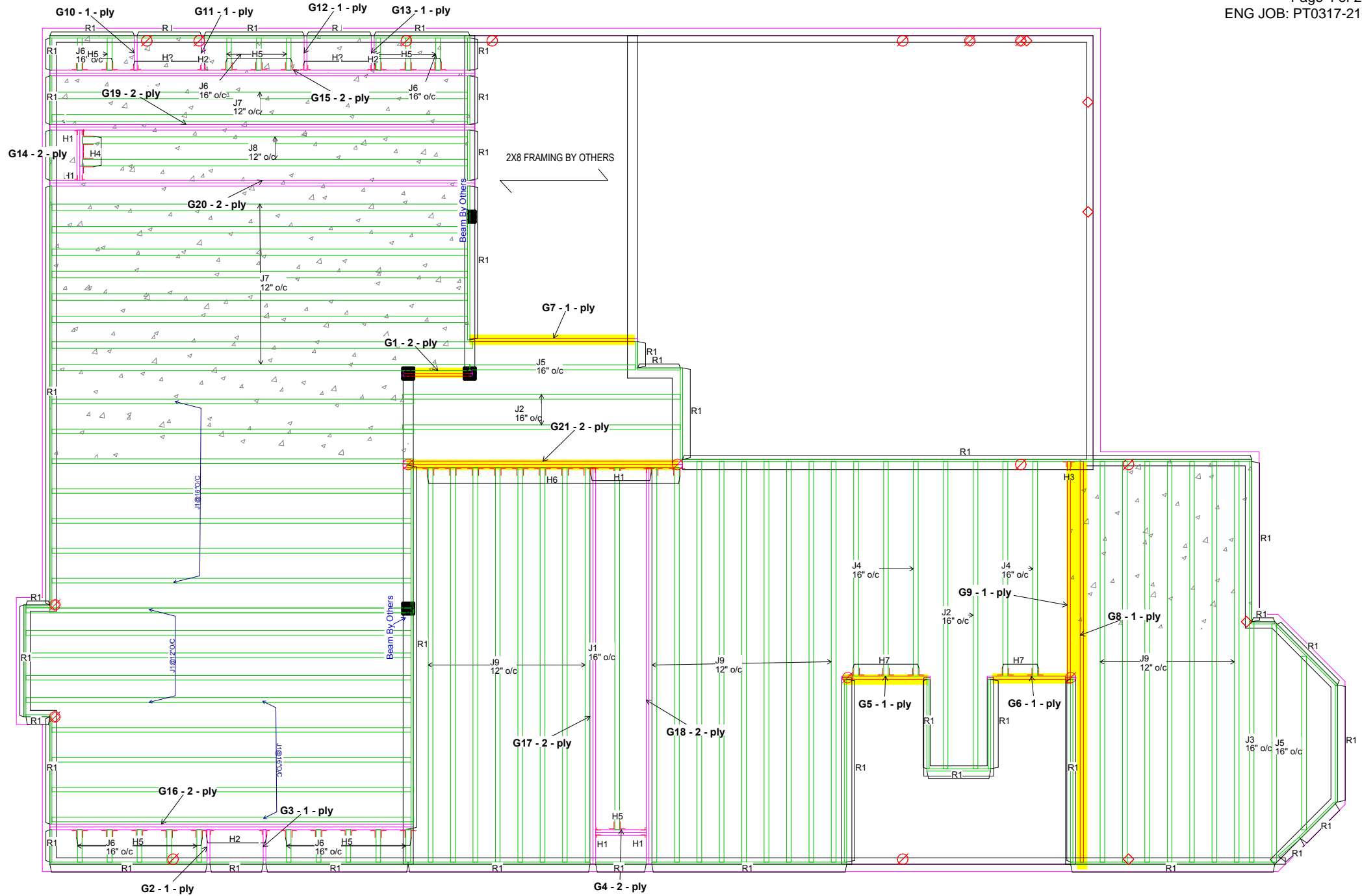
ID#	Qty	Model Number
H1	6	LF2-1511
H2	6	LF1511
H3	1	IUS1.81/9.5
H4	2	LF3511
H5	19	LF2511
H6	11	LT251188
H7	5	LF2511

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



HATCH AREA INDICATED REPRESENTS
CERAMIC TILED FLOOR WITH AN
ADDITIONAL DEAD LOAD OF 5.00 PSF

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



NOTES:

1. Framers 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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation details.
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.

FIRST FLOOR FRAMING

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT: 17-4690

BUILDING: REVIEWED
SCOTT SHERRIFFS
PLANS EXAMINER
DATE: APR 19, 2017

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

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Uxbridge, ON.
www.nascor.ca

Project Tag:

LOT 100 (JU- 9 EL 3)

GREEN PARK HOMES
LECCO RIDGE
MILTON ,ON

SALESMAN: RM

Time: 02:03 PM
DATE: 03/24/17
Designer: SB
Not Scaled
License Name:
KEYMARK ENTERPRISES, INC.

Member Data

Description: CalcG1

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Standard Load:

Live Load: 0 PLF

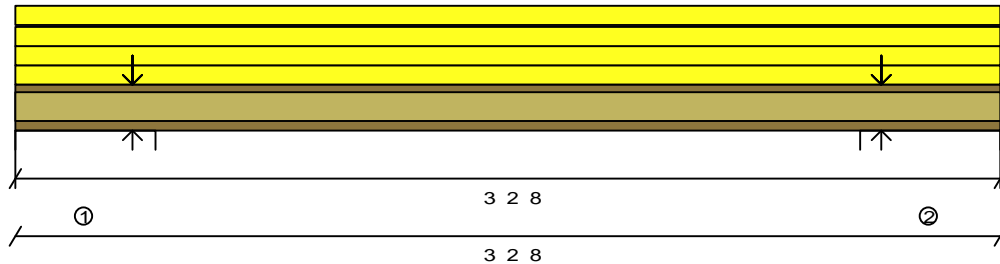
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	3' 2.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		53		60		Live
Point (LBS)	Top	0' 4.63"			0		32		Live
Point (LBS)	Top	0' 4.63"			192		72		Live
Point (LBS)	Top	0' 4.63"			256		110		Live
Point (LBS)	Top	2' 9.88"			4		1		Live
Point (LBS)	Top	2' 9.88"			142		53		Live
Point (LBS)	Top	2' 9.88"			300		157		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	1268#	--
2	3' 2.500"	Wall	N/A	N/A	1.500"	1262#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	578#	320#
2	576#	318#

Design spans
 2' 5.250"



Product: NJ12 2 ply

Design assumes continuous lateral bracing along the top chord.
 Design assumes no lateral bracing along the bottom chord.
 Lateral support is required at each bearing.

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PASSES DESIGN CHECKS

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	200. #	9020. #	2%	1.6'	Total Load 1.25D+1.5L
Shear	328. #	3400. #	9%	0'	Total Load 1.25D+1.5L
End Reaction	1268. #	4100. #	30%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0015"	0.0812"	L/999+	1.6'	Total Load D+L
LL Deflection	0.0010"	0.0609"	L/999+	1.6'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

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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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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 on this drawing meets applicable design criteria for Loads, Loading Conditions, and Spans listed on this sheet.
 al as required for approval. This design assumes product installation according to the manufacturer's specifications.

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 Uxbridge, ON.
 www.nascor.ca



Member Data**Description:** CalcG2**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

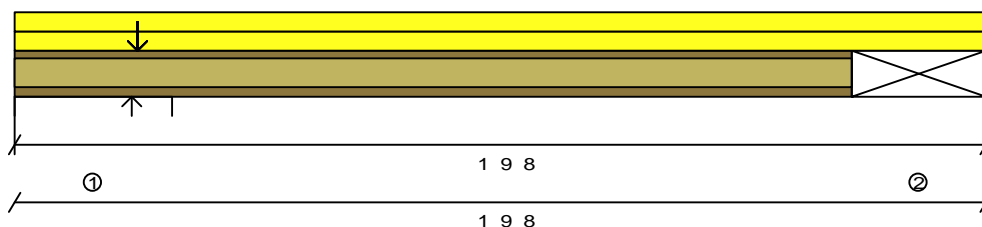
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			29		76		Live
Point (LBS)	Top	0' 2.75"			148		148		Live
Point (LBS)	Top	0' 2.75"			340		0		Snow

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	993#	--
2	1' 9.500"	Girder	N/A	N/A	N/A	69#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	212#	340#	301#
2	35#	0#	13#

Design spans

1' 3.875"

**Product: NJ12 1 ply**

Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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PASSES DESIGN CHECKS**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	23.1#	4510.1#	0%	0.88'	Total Load 1.25D+1.5L
End Reaction	993.1#	2050.1#	48%	0'	Total Load 1.25D+1.00*1.5S+0.5L
TL Deflection	0.0010"	0.0441"	L/999+	0.88'	Total Load D+L
LL Deflection	0.0010"	0.0331"	L/999+	0.88'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

**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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Member Data**Description:** CalcG3**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

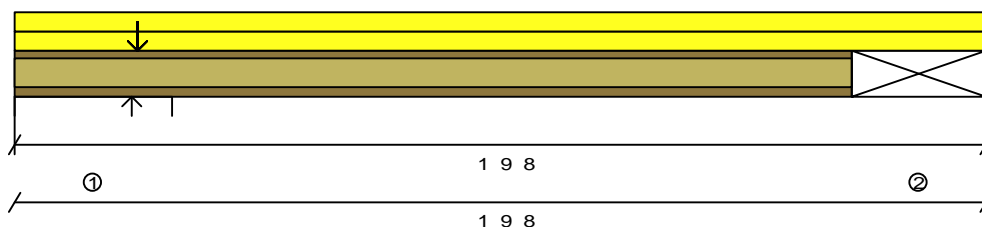
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			29		76		Live
Point (LBS)	Top	0' 2.75"			148		148		Live
Point (LBS)	Top	0' 2.75"			340		0		Snow

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	993#	--
2	1' 9.500"	Girder	N/A	N/A	N/A	69#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	212#	340#	301#
2	35#	0#	13#

Design spans

1' 3.875"

**Product: NJ12 1 ply**

Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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PASSES DESIGN CHECKS**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	23.1#	4510.1#	0%	0.88'	Total Load 1.25D+1.5L
End Reaction	993.1#	2050.1#	48%	0'	Total Load 1.25D+1.00*1.5S+0.5L
TL Deflection	0.0010"	0.0441"	L/999+	0.88'	Total Load D+L
LL Deflection	0.0010"	0.0331"	L/999+	0.88'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

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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al as required for approval. This design assumes product installation according to the manufacturer's specifications.

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www.nascor.ca



Member Data

Description: CalcG4

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type

(Description)

Replacement Uniform (PLF)

Side

Top

Begin

0' 0.00"

End

2' 9.00"

Trib.
Width

Other
Start

329

End

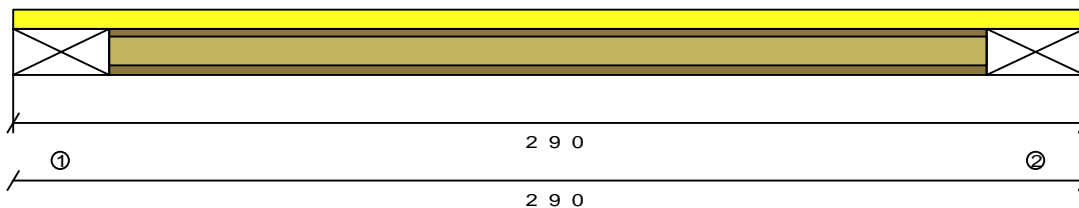
Dead
Start

123

End

Category

Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	728#	--
2	2' 9.000"	Girder	N/A	N/A	N/A	728#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	370#	139#
2	370#	139#

Design spans

2' 3.000"



Product: NJ12 2 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Lateral support is required at each bearing.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	410. #	9020. #	4%	1.38'	Total Load 1.25D+1.5L
Shear	728. #	3400. #	21%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0030"	0.0750"	L/999+	1.38'	Total Load D+L
LL Deflection	0.0022"	0.0563"	L/999+	1.38'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Shear

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Web stiffener and minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

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

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Member Data**Description:** CalcG5**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads**Type****(Description)**

Replacement Uniform (PLF)

Point (LBS)

Side

Top

Top

Begin

0' 0.00"

0' 4.63"

End

3' 11.50"

**Trib.
Width****Other
Start**

195

1647

End**Dead
Start**

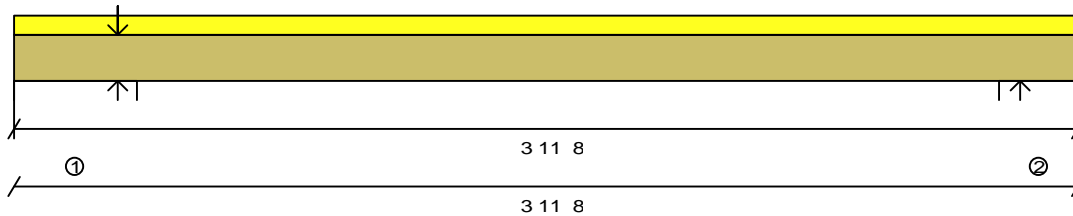
73

688

End**Category**

Live

Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	2.190"	3986#	--
2	3' 11.500"	Wall	N/A	N/A	1.500"	656#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	1974#	820#
2	327#	133#

Design spans

3' 4.250"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply****PASSES DESIGN CHECKS**Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	550. #	17693. #	3%	2.06'	Total Load 1.25D+1.5L
Shear	269. #	6908. #	3%	2.9'	Total Load 1.25D+1.5L
TL Deflection	0.0037"	0.1118"	L/999+	2.06'	Total Load D+L
LL Deflection	0.0027"	0.0839"	L/999+	2.06'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: Shear

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Member Data

Description: CalcG6

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

Live Load: 0 PLF

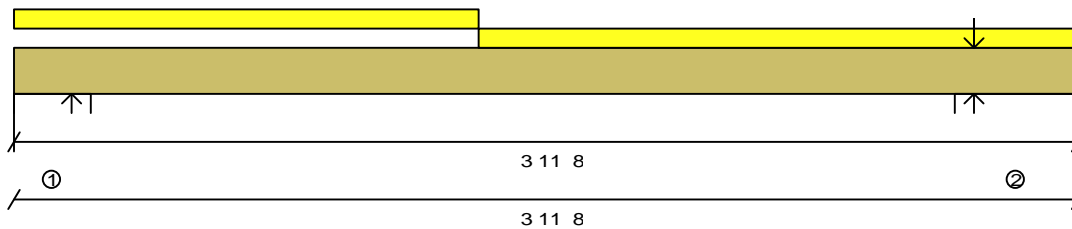
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 8.75"		195		73		Live
Replacement Uniform (PLF)	Top	1' 8.75"	3' 11.50"		195		73		Live
Point (LBS)	Top	3' 6.88"			1099		487		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	656#	--
2	3' 11.500"	Wall	N/A	N/A	1.601"	2914#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	327#	133#
2	1426#	620#

Design spans
 3' 4.250"



Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.
 Design assumes no lateral bracing along the bottom chord.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	550. #	17693. #	3%	1.9'	Total Load 1.25D+1.5L
Shear	269. #	6908. #	3%	2.73'	Total Load 1.25D+1.5L
TL Deflection	0.0037"	0.1118"	L/999+	1.9'	Total Load D+L
LL Deflection	0.0027"	0.0839"	L/999+	1.9'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: Shear

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

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Member Data

Description: CalcG7

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

Live Load: 0 PLF

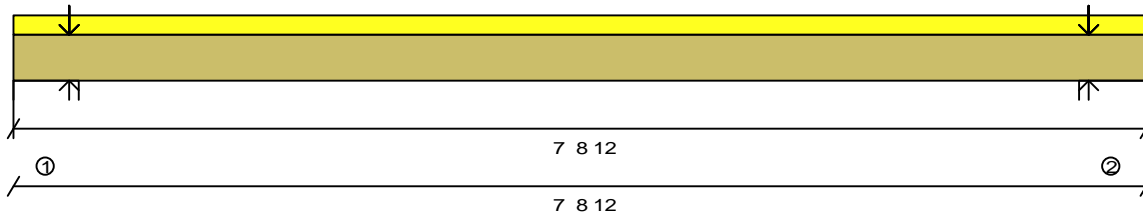
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	7' 8.75"		27		10		Live
Point (LBS)	Top	0' 4.63"			116		44		Live
Point (LBS)	Top	0' 4.63"			116		44		Live
Point (LBS)	Top	0' 4.63"			300		157		Live
Point (LBS)	Top	0' 4.63"			300		157		Live
Point (LBS)	Top	7' 4.13"			0		32		Live
Point (LBS)	Top	7' 4.13"			116		44		Live
Point (LBS)	Top	7' 4.13"			259		103		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	1958#	--
2	7' 8.750"	Wall	N/A	N/A	1.500"	996#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	925#	456#
2	468#	235#

Design spans
6' 11.500"



Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	362. #	17693. #	2%	3.86'	Total Load 1.25D+1.5L
Shear	149. #	6908. #	2%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.0060"	0.2319"	L/999+	3.86'	Total Load D+L
LL Deflection	0.0038"	0.1740"	L/999+	3.86'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

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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

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Member Data**Description:** CalcG8**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

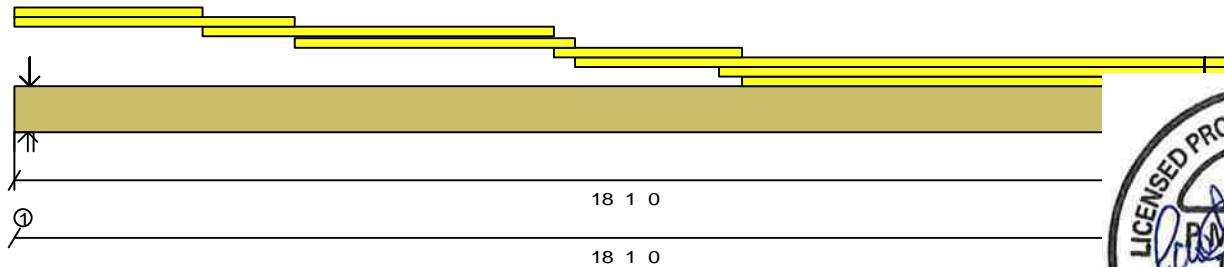
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Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	2' 9.63"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	4' 2.00"		27		10		Live
Replacement Uniform (PLF)	Top	2' 9.63"	8' 0.31"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	8' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 0.31"	10' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 4.00"	18' 1.00"		27		10		Live
Additional Uniform (PLF)	Top	10' 6.00"	18' 1.00"		0		7		Live
Replacement Uniform (PLF)	Top	10' 10.00"	18' 1.00"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		105		Live
Point (LBS)	Top	0' 2.75"			269		0		Snow
Point (LBS)	Top	0' 2.75"			535		355		Live
Point (LBS)	Top	17' 8.38"			0		40		Live
Point (LBS)	Top	17' 8.38"			0		53		Live
Point (LBS)	Top	17' 8.38"			104		0		Snow
Point (LBS)	Top	17' 8.38"			140		125		Live
Point (LBS)	Top	17' 8.38"			270		0		Snow
Point (LBS)	Top	17' 8.38"			193		138		Live
Point (LBS)	Top	17' 8.38"			386		275		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	2507#	--
2	18' 1.000"	Wall	N/A	N/A	1.695"	3084#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1001#	269#	697#
2	1186#	374#	895#

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

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Detail for ply to ply nailing or bolting
requirements

Design spans

17' 5.750"

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply**PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4400. #	17693. #	24%	8.96'	Total Load 1.25D+1.5L
Shear	910. #	6908. #	13%	16.82'	Total Load 1.25D+1.5L
TL Deflection	0.3683"	0.5826"	L/569	8.96'	Total Load D+L
LL Deflection	0.2406"	0.4370"	L/871	8.96'	Total Load L

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Member Data**Description: CalcG9**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

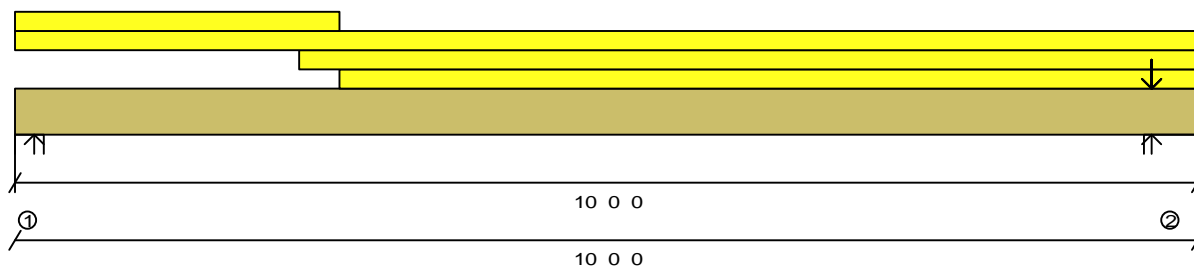
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads**Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	2' 9.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	10' 0.00"		27		10		Live
Additional Uniform (PLF)	Top	2' 5.00"	10' 0.00"		0		7		Live
Replacement Uniform (PLF)	Top	2' 9.00"	10' 0.00"		27		10		Live
Point (LBS)	Top	9' 7.38"			0		65		Live
Point (LBS)	Top	9' 7.38"			333		0		Snow
Point (LBS)	Top	9' 7.38"			248		220		Live
Point (LBS)	Top	9' 7.38"			354		252		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	553#	--
2	10' 0.000"	Wall	N/A	N/A	1.500"	2308#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	252#	0#	141#
2	854#	333#	689#

Design spans

9' 5.250"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	1333.1#	17693.1#	7%	4.9'	Total Load 1.25D+1.5L
Shear	448.1#	6908.1#	6%	8.67'	Total Load 1.25D+1.5L
TL Deflection	0.0363"	0.3146"	L/999+	4.9'	Total Load D+L
LL Deflection	0.0228"	0.2359"	L/999+	4.9'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

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Member Data**Description: CalcG10**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

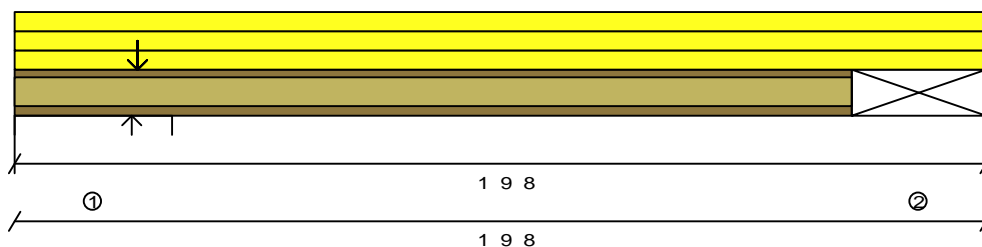
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Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	1' 9.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Point (LBS)	Top	0' 2.75"			15		6		Live
Point (LBS)	Top	0' 2.75"			43		16		Live
Point (LBS)	Top	0' 2.75"			0		130		Live
Point (LBS)	Top	0' 2.75"			53		121		Snow

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upl
1	0' 0.000"	Wall	N/A	N/A	1.500"	504#	--
2	1' 9.500"	Girder	N/A	N/A	N/A	52#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	81#	53#	285#
2	24#	0#	13#

Design spans
1' 3.875"**Product: NJ12 1 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Lateral support is required at each bearing.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	17.7#	4510.7#	0%	0.88'	Total Load 1.25D+1.5L
End Reaction	504.7#	2050.7#	24%	0'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.0010"	0.0441"	L/999+	0.88'	Total Load D+L
LL Deflection	0.0010"	0.0331"	L/999+	0.88'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hanged connections depend on the connection style and are not included in this design.

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Member Data

Description: CalcG11

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Standard Load:

Live Load: 0 PLF

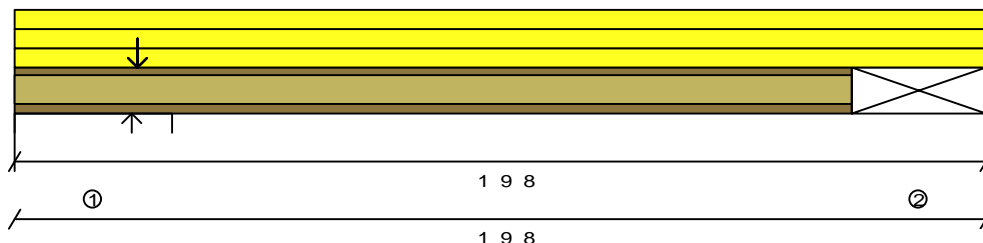
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	1' 9.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Point (LBS)	Top	0' 2.75"			7		3		Live
Point (LBS)	Top	0' 2.75"			7		3		Live
Point (LBS)	Top	0' 2.75"			21		8		Live
Point (LBS)	Top	0' 2.75"			21		8		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			340		0		Snow
Point (LBS)	Top	0' 2.75"			148		213		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	1096#	--
2	1' 9.500"	Girder	N/A	N/A	N/A	52#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	229#	340#	377#
2	24#	0#	13#

Design spans

1' 3.875"



Product: NJ12 1 ply

Design assumes continuous lateral bracing along the top chord.
 Design assumes no lateral bracing along the bottom chord.
 Lateral support is required at each bearing.

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PASSES DESIGN CHECKS

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	17.7#	4510.7#	0%	0.88'	Total Load 1.25D+1.5L
End Reaction	1096.7#	2050.7#	53%	0'	Total Load 1.25D+1.00*1.5S+0.5L
TL Deflection	0.0010"	0.0441"	L/999+	0.88'	Total Load D+L
LL Deflection	0.0010"	0.0331"	L/999+	0.88'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

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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Member Data**Description:** CalcG12**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

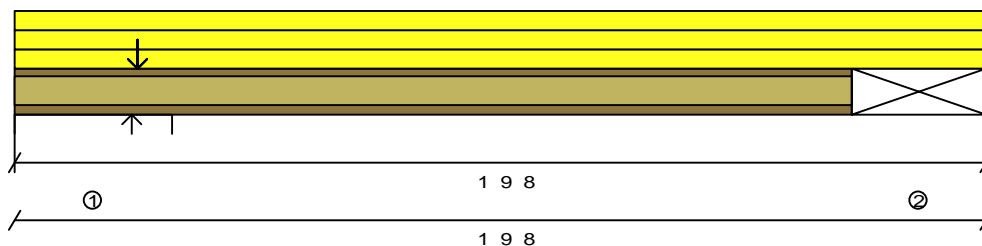
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	1' 9.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Point (LBS)	Top	0' 2.75"			15		6		Live
Point (LBS)	Top	0' 2.75"			43		16		Live
Point (LBS)	Top	0' 2.75"			0		130		Live
Point (LBS)	Top	0' 2.75"			681		0		Snow
Point (LBS)	Top	0' 2.75"			296		426		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	2.172"	1947#	--
2	1' 9.500"	Girder	N/A	N/A	N/A	52#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	377#	681#	590#
2	24#	0#	13#

Design spans

1' 3.875"

**Product: NJ12 1 ply**

Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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PASSES DESIGN CHECKS**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	17.7#	4510.7#	0%	0.88'	Total Load 1.25D+1.5L
End Reaction	1947.7#	2050.7#	94%	0'	Total Load 1.25D+1.00*1.5S+0.5L
TL Deflection	0.0010"	0.0441"	L/999+	0.88'	Total Load D+L
LL Deflection	0.0010"	0.0331"	L/999+	0.88'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

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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Member Data**Description: CalcG13**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

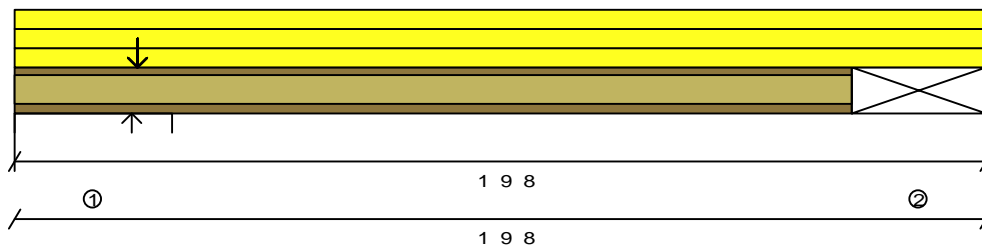
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Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads**Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	1' 9.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 9.50"		27		10		Live
Point (LBS)	Top	0' 2.75"			7		3		Live
Point (LBS)	Top	0' 2.75"			7		3		Live
Point (LBS)	Top	0' 2.75"			21		8		Live
Point (LBS)	Top	0' 2.75"			21		8		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			340		0		Snow
Point (LBS)	Top	0' 2.75"			340		0		Snow
Point (LBS)	Top	0' 2.75"			148		213		Live
Point (LBS)	Top	0' 2.75"			148		213		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upl
1	0' 0.000"	Wall	N/A	N/A	2.172"	1947#	--
2	1' 9.500"	Girder	N/A	N/A	N/A	52#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	377#	681#	590#
2	24#	0#	13#

Design spans

1' 3.875"

**Product: NJ12 1 ply**

Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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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

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	17.7#	4510.7#	0%	0.88'	Total Load 1.25D+1.5L
End Reaction	1947.7#	2050.7#	94%	0'	Total Load 1.25D+1.00*1.5S+0.5L
TL Deflection	0.0010"	0.0441"	L/999+	0.88'	Total Load D+L
LL Deflection	0.0010"	0.0331"	L/999+	0.88'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

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Member Data

Description: CalcG14

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

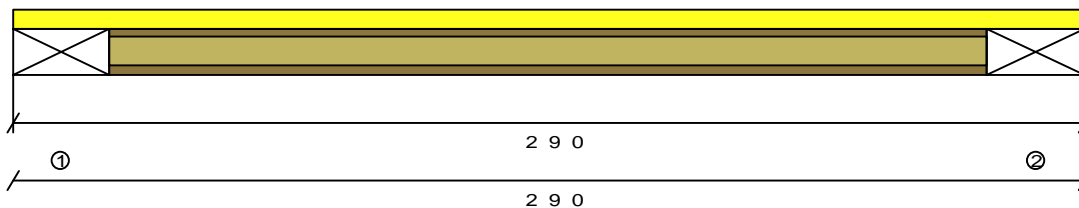
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Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	2' 9.00"		348		174		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	833#	--
2	2' 9.000"	Girder	N/A	N/A	N/A	833#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	392#	196#
2	392#	196#

Design spans
2' 3.000"

Product: NJ12 2 ply

Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	468. #	9020. #	5%	1.38'	Total Load 1.25D+1.5L
Shear	833. #	3400. #	24%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0034"	0.0750"	L/999+	1.38'	Total Load D+L
LL Deflection	0.0023"	0.0563"	L/999+	1.38'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Shear

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Web stiffener and minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

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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Member Data**Description:** CalcG15

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

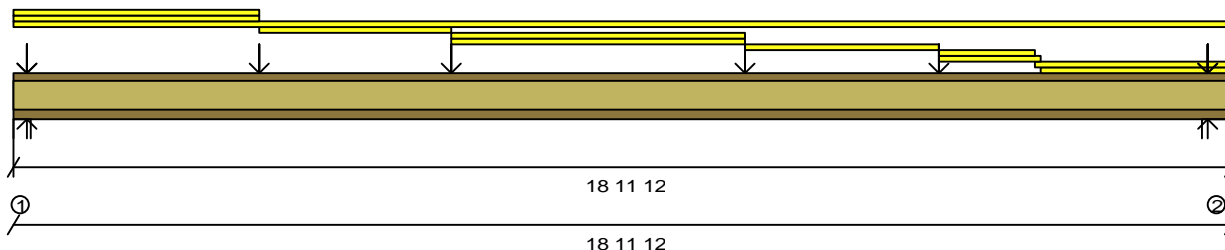
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Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	3' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 10.00"		33		17		Live
Additional Uniform (PLF)	Top	0' 0.00"	18' 11.75"		0		7		Live
Replacement Uniform (PLF)	Top	3' 10.00"	6' 10.00"		9		3		Live
Replacement Uniform (PLF)	Top	6' 10.00"	11' 5.00"		27		10		Live
Replacement Uniform (PLF)	Top	6' 10.00"	11' 5.00"		33		17		Live
Replacement Uniform (PLF)	Top	11' 5.00"	14' 5.00"		9		3		Live
Replacement Uniform (PLF)	Top	14' 5.00"	15' 11.00"		33		17		Live
Replacement Uniform (PLF)	Top	14' 5.00"	16' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	15' 11.00"	18' 11.75"		33		17		Live
Replacement Uniform (PLF)	Top	16' 0.00"	18' 11.75"		27		10		Live
Point (LBS)	Top	0' 2.75"			49		65		Snow
Point (LBS)	Top	0' 2.75"			322		229		Live
Point (LBS)	Top	3' 10.00"			0		12		Live
Point (LBS)	Top	6' 10.00"			0		12		Live
Point (LBS)	Top	11' 5.00"			0		12		Live
Point (LBS)	Top	14' 5.00"			0		12		Live
Point (LBS)	Top	18' 7.13"			116		44		Live
Point (LBS)	Top	18' 7.13"			300		157		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravi Upli
1	0' 0.000"	Wall	N/A	N/A	1.500"	1787#	--
2	18' 11.750"	Wall	N/A	N/A	1.500"	1805#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	715#	49#	552#
2	819#	0#	462#

**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**Design spans
18' 4.500"**Product: NJ12 2 ply**

NOTE: Web stiffeners are required at point loads > 0#.
Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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PASSES DESIGN CHECKS**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4002.##	9020.##	44%	9.41'	Total Load 1.25D+1.5L
Shear	930.##	3400.##	27%	18.98'	Total Load 1.25D+1.5L

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Member Data**Description:** CalcG16**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

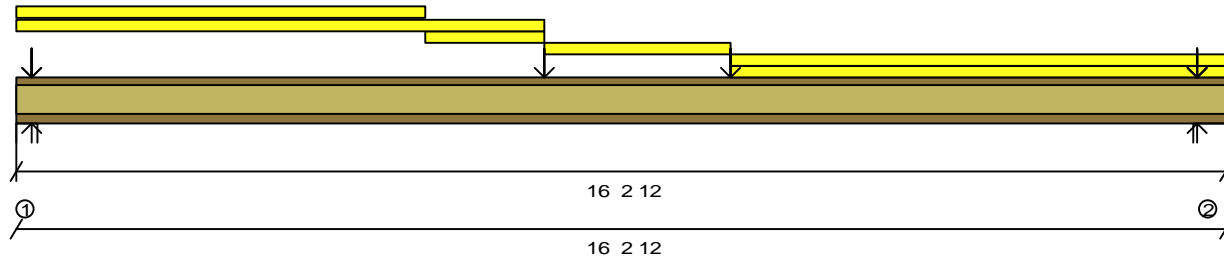
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	5' 6.00"		33		13		Live
Replacement Uniform (PLF)	Top	0' 0.00"	7' 1.00"		27		10		Live
Replacement Uniform (PLF)	Top	5' 6.00"	7' 1.00"		33		13		Live
Replacement Uniform (PLF)	Top	7' 1.00"	9' 7.00"		9		3		Live
Replacement Uniform (PLF)	Top	9' 7.00"	16' 2.75"		27		10		Live
Replacement Uniform (PLF)	Top	9' 7.00"	16' 2.75"		33		13		Live
Point (LBS)	Top	0' 2.75"			49		0		Snow
Point (LBS)	Top	0' 2.75"			278		247		Live
Point (LBS)	Top	7' 1.00"			0		12		Live
Point (LBS)	Top	9' 7.00"			0		12		Live
Point (LBS)	Top	15' 10.13"			21		8		Live
Point (LBS)	Top	15' 10.13"			0		32		Live
Point (LBS)	Top	15' 10.13"			256		100		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravi Upli
1	0' 0.000"	Wall	N/A	N/A	1.500"	1566#	--
2	16' 2.750"	Wall	N/A	N/A	1.500"	1399#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	685#	49#	411#
2	680#	0#	303#

Design spans

15' 7.500"

**Product: NJ12 2 ply**

NOTE: Web stiffeners are required at point loads > 0#.
Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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PASSES DESIGN CHECKS

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

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	2818. #	9020. #	31%	7.08'	Total Load 1.25D+1.5L
Shear	816. #	3400. #	23%	0'	Total Load 1.25D+1.5L
End Reaction	1566. #	4100. #	38%	0'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.1973"	0.5208"	L/950	8.03'	Total Load D+L
LL Deflection	0.1386"	0.3906"	L/999+	8.03'	Total Load L

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Member Data**Description:** CalcG17**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

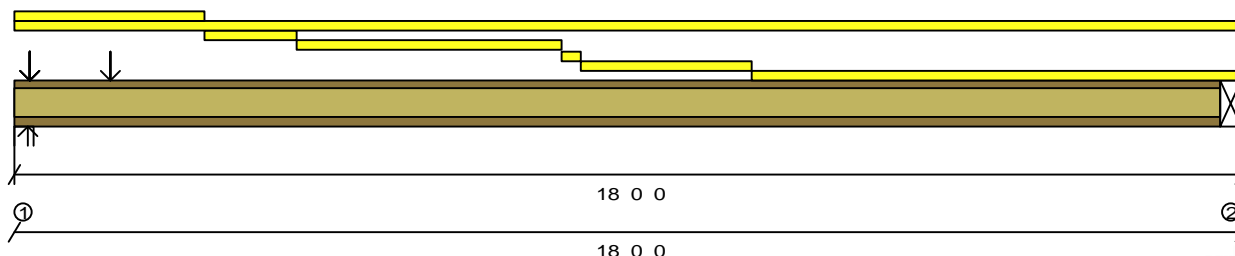
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	2' 9.63"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	2' 9.63"	4' 2.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	8' 0.31"		27		10		Live
Replacement Uniform (PLF)	Top	8' 0.31"	8' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 4.00"	10' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	10' 10.00"	18' 0.00"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			340		0		Snow
Point (LBS)	Top	0' 2.75"			434		320		Live
Point (LBS)	Top	1' 5.00"			411		172		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	2994#	--
2	18' 0.000"	Girder	N/A	N/A	N/A	975#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1283#	340#	719#
2	495#	0#	187#

Design spans

17' 5.875"

**Product: NJ12 2 ply****PASSES DESIGN CHECKS**

NOTE: Web stiffeners are required at point loads > 0#.
Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4528.1#	9020.1#	50%	8.34'	Total Load 1.25D+1.5L
Shear	1692.1#	3400.1#	49%	0'	Total Load 1.25D+1.5L
End Reaction	2994.1#	4100.1#	73%	0'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.3820"	0.5830"	L/549	8.96'	Total Load D+L
LL Deflection	0.2767"	0.4372"	L/758	8.96'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

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
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Member Data

Description: CalcG18

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

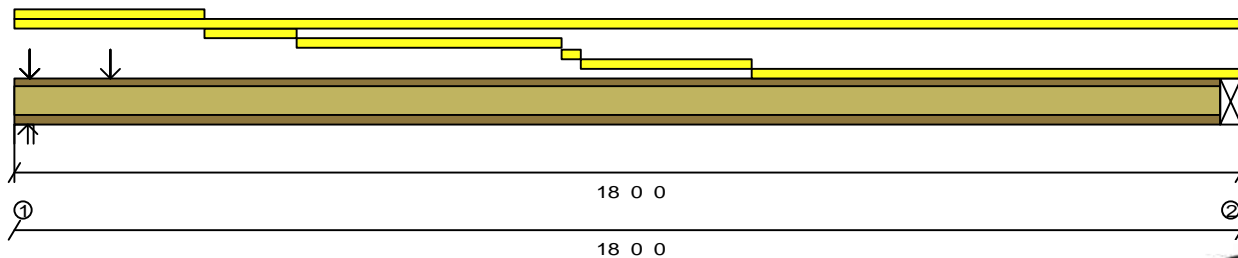
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Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	2' 9.63"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	2' 9.63"	4' 2.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	8' 0.31"		27		10		Live
Replacement Uniform (PLF)	Top	8' 0.31"	8' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 4.00"	10' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	10' 10.00"	18' 0.00"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		65		Live
Point (LBS)	Top	0' 2.75"			340		0		Snow
Point (LBS)	Top	0' 2.75"			434		320		Live
Point (LBS)	Top	1' 5.00"			411		172		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	2994#	--
2	18' 0.000"	Girder	N/A	N/A	N/A	975#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1283#	340#	719#
2	495#	0#	187#

Design spans
 17' 5.875"



Product: NJ12 2 ply

PASSES DESIGN CHECKS

NOTE: Web stiffeners are required at point loads > 0#.
 Design assumes continuous lateral bracing along the top chord.
 Design assumes no lateral bracing along the bottom chord.
 Lateral support is required at each bearing.

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Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4528.1#	9020.1#	50%	8.34'	Total Load 1.25D+1.5L
Shear	1692.1#	3400.1#	49%	0'	Total Load 1.25D+1.5L
End Reaction	2994.1#	4100.1#	73%	0'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.3820"	0.5830"	L/549	8.96'	Total Load D+L
LL Deflection	0.2767"	0.4372"	L/758	8.96'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

Pass Through 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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Member Data

Description: CalcG19

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

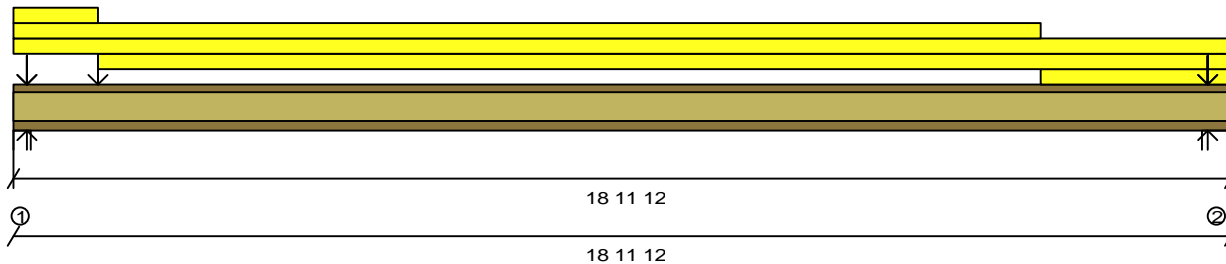
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 4.00"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	16' 0.00"		27		10		Live
Additional Uniform (PLF)	Top	0' 0.00"	18' 11.75"		0		7		Live
Replacement Uniform (PLF)	Top	1' 4.00"	18' 11.75"		27		10		Live
Replacement Uniform (PLF)	Top	16' 0.00"	18' 11.75"		27		10		Live
Point (LBS)	Top	0' 2.75"			49		65		Snow
Point (LBS)	Top	0' 2.75"			322		229		Live
Point (LBS)	Top	1' 4.00"			435		235		Live
Point (LBS)	Top	18' 7.13"			233		87		Live
Point (LBS)	Top	18' 7.13"			600		313		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	2767#	--
2	18' 11.750"	Wall	N/A	N/A	1.500"	2847#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1201#	49#	752#
2	1348#	0#	660#

Design spans

18' 4.500"



Product: NJ12 2 ply

PASSES DESIGN CHECKS

NOTE: Web stiffeners are required at point loads > 0#.
 Design assumes continuous lateral bracing along the top chord.
 Design assumes no lateral bracing along the bottom chord.
 Lateral support is required at each bearing.

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Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	5304. #	9020. #	58%	8.49'	Total Load 1.25D+1.5L
Shear	1893. #	3400. #	55%	0'	Total Load 1.25D+1.5L
End Reaction	2847. #	4100. #	69%	18.98'	Total Load 1.25D+1.5L
TL Deflection	0.4960"	0.6125"	L/444	9.41'	Total Load D+L
LL Deflection	0.3296"	0.4594"	L/669	9.41'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

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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Member Data**Description: CalcG20**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Deck Connection: Nailed

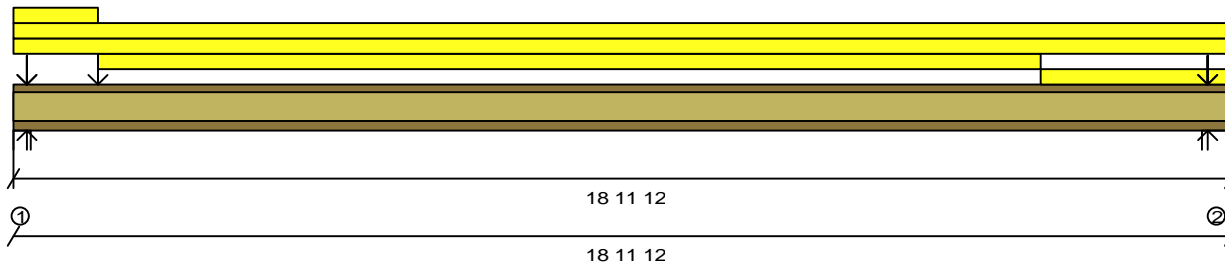
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 4.00"		9		3		Live
Additional Uniform (PLF)	Top	0' 0.00"	18' 11.75"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 11.75"		27		10		Live
Replacement Uniform (PLF)	Top	1' 4.00"	16' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	16' 0.00"	18' 11.75"		27		10		Live
Point (LBS)	Top	0' 2.75"			49		65		Snow
Point (LBS)	Top	0' 2.75"			322		229		Live
Point (LBS)	Top	1' 4.00"			435		235		Live
Point (LBS)	Top	18' 7.13"			233		87		Live
Point (LBS)	Top	18' 7.13"			600		313		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	2767#	--
2	18' 11.750"	Wall	N/A	N/A	1.500"	2847#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1201#	49#	752#
2	1348#	0#	660#

Design spans

18' 4.500"

**Product: NJ12 2 ply**

NOTE: Web stiffeners are required at point loads > 0#.
Design assumes continuous lateral bracing along the top chord.
Design assumes no lateral bracing along the bottom chord.
Lateral support is required at each bearing.

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PASSES DESIGN CHECKS**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	5304. #	9020. #	58%	8.49'	Total Load 1.25D+1.5L
Shear	1893. #	3400. #	55%	0'	Total Load 1.25D+1.5L
End Reaction	2847. #	4100. #	69%	18.98'	Total Load 1.25D+1.5L
TL Deflection	0.4960"	0.6125"	L/444	9.41'	Total Load D+L
LL Deflection	0.3296"	0.4594"	L/669	9.41'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

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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Member Data**Description:** CalcG21**Comments:****Member Type:** Girder**Application:** Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

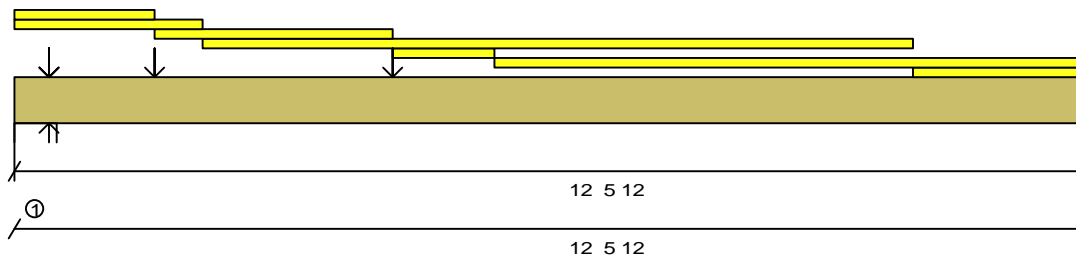
Deck Connection: Nailed

Member Weight: 11.8 PLF

Filename: S:\CUSTOMERS

Building Type: Residential**Importance Category:** Normal (Part 9)**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 6.00"		357		134		Live
Replacement Uniform (PLF)	Top	0' 0.00"	2' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	1' 6.00"	4' 0.00"		329		123		Live
Replacement Uniform (PLF)	Top	2' 0.00"	9' 6.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 0.00"	5' 1.00"		357		134		Live
Replacement Uniform (PLF)	Top	5' 1.00"	12' 5.75"		357		134		Live
Replacement Uniform (PLF)	Top	9' 6.00"	12' 5.75"		27		10		Live
Point (LBS)	Top	0' 4.63"			192		72		Live
Point (LBS)	Top	0' 4.63"			245		124		Live
Point (LBS)	Top	0' 4.63"			2146		899		Live
Point (LBS)	Top	1' 6.00"			33		139		Live
Point (LBS)	Top	4' 0.00"			33		139		Live
Point (LBS)	Top	12' 1.13"			21		8		Live
Point (LBS)	Top	12' 1.13"			0		32		Live
Point (LBS)	Top	12' 1.13"			0		32		Live
Point (LBS)	Top	12' 1.13"			192		72		Live
Point (LBS)	Top	12' 1.13"			256		96		Live
Point (LBS)	Top	12' 1.13"			256		96		Live
Point (LBS)	Top	12' 1.13"			2146		912		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	2.746"	9997#	--
2	12' 5.750"	Wall	N/A	N/A	2.868"	10439#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	4826#	2207#
2	5117#	2211#

**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****RECEIVED
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11' 8.500"**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	13559. #	35386. #	38%	6.24'	Total Load 1.25D+1.5L
Shear	3990. #	13815. #	28%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.2678"	0.3903"	L/524	6.24'	Total Load D+L
LL Deflection	0.1840"	0.2927"	L/763	6.24'	Total Load L

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----- Floor Framing Material -----

Type	Qty.	Product	Length
J1	16	NJH12	18' 0"
J2	3	NJH12	16' 0"
J3	3	NJH12	14' 0"
J4	2	NJH12	12' 0"
J5	8	NJH12	10' 0"
J6	12	NJH12	8' 0"
J7	1	NJH12	6' 0"
J8	15	NJ60U12	20' 0"
J9	6	NJ60H12	22' 0"
J10	4	NJ60H12	20' 0"
J11	32	NJ60H12	18' 0"
G1	2	1 3/4x11 7/8 West Fraser 2.0E-	12' 0"
G2	2	1 3/4x11 7/8 West Fraser 2.0E-	14' 0"
R1	19	11 7/8" RIMBOARD	12' 0"
R2	1	11 7/8" RIMBOARD	12' 0"

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DESIGN ASSUMPTIONS
=====

Loads:(un-factored)
T/C Live: 40 psf B/C Live: 0 psf
T/C Dead: 15 psf B/C Dead: 0 psf
Load Case: Live
Deflection Criteria:
L/480 Live L/360 Total
Building Code: OBC-2012 (Limit States Design
Building Type: Residential
Importance Category: Normal (Part 9)
Design assumes top edge continuously braced,
and bottom edge unbraced.
Joist Design Includes CCMC Vibration Check
Subfloor: 5/8" OSB Glued and Nailed
Ceiling: 1/2" gypsum
Blocking: (None)

All Loads are UN-FACTORED Loads

NOTES:

1. Framers 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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation details.
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.

----- Connector List -----

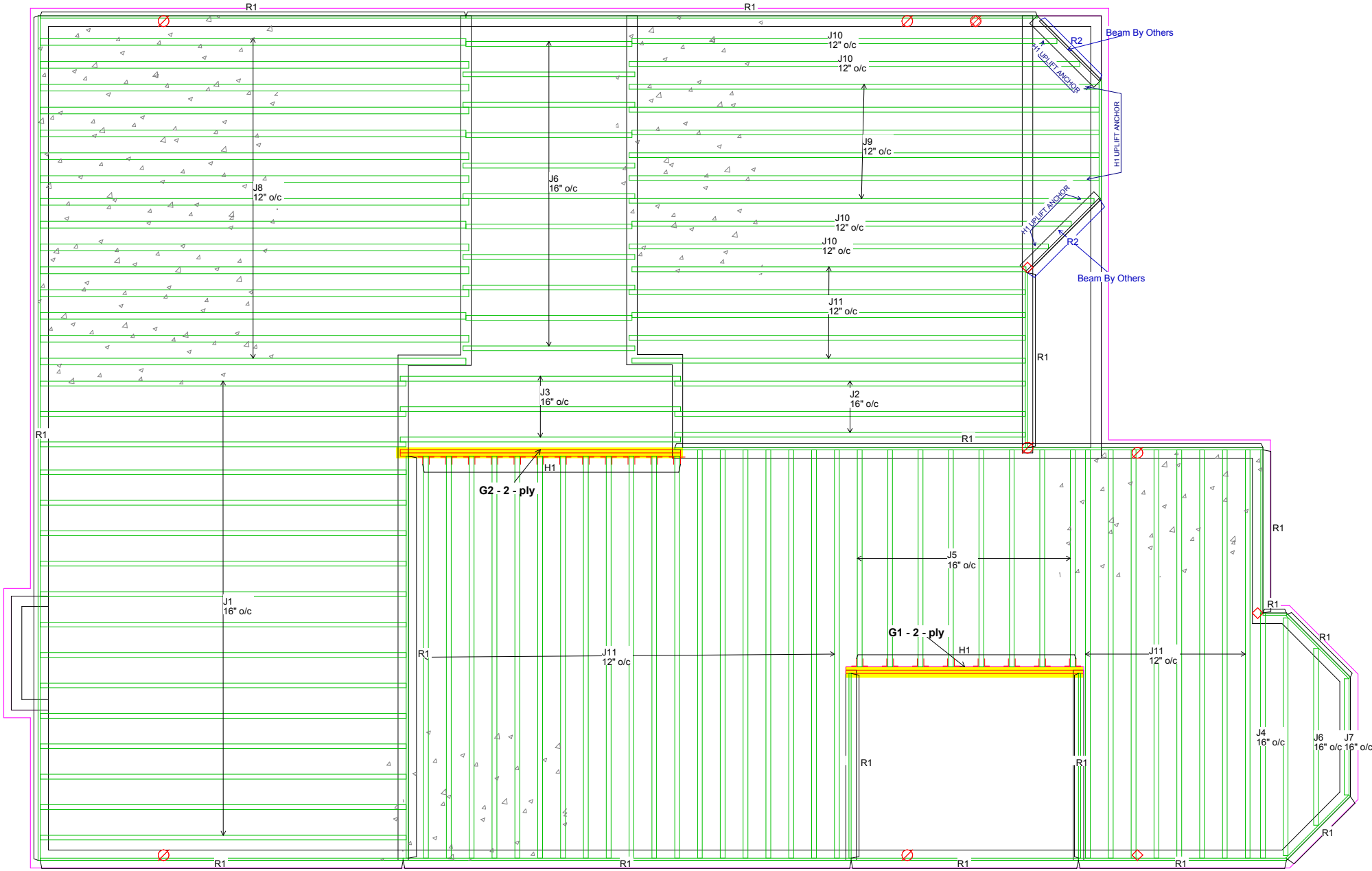
ID#	Qty	Model Number
H1	20	LT251188
H1	10	UPLIFT ANCHOR

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 INDICATED REPRESENTS CERAMIC TILED FLOOR WITH AN ADDITIONAL DEAD LOAD OF 5.00 PSF

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

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



SECOND FLOOR FRAMING



TOWN OF MILTON

PLANNING AND DEVELOPMENT

BUILDING PERMIT: 17-4690

BUILDING: REVIEWED

SCOTT SHERRIFFS

PLANS EXAMINER

APR 19, 2017

DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

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Project Tag:

LOT 100 (JU-9 EL-3)

GREEN PARK HOMES
LECCO RIDGE
MILTON ,ON

SALESMAN: RM

Time: 12:42 PM
DATE: 24/03/17
Designer: SB
Not Scaled
License Name:
KEYMARK ENTERPRISES, INC.

Member Data

Description: CalcG1

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 11.8 PLF

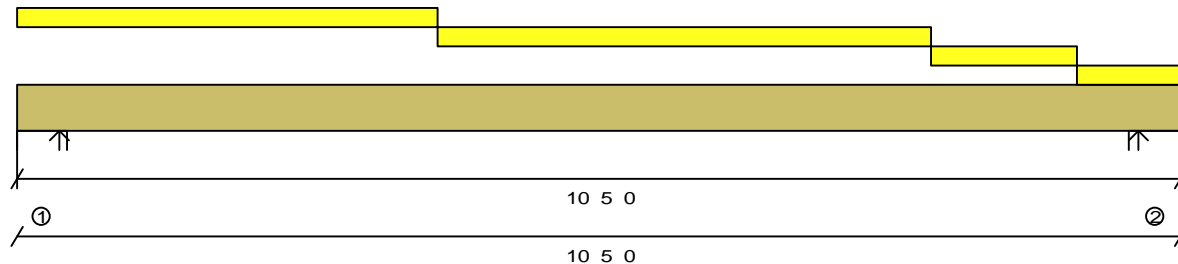
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	3' 9.25"		430		161		Live
Replacement Uniform (PLF)	Top	3' 9.25"	8' 2.25"		190		71		Live
Replacement Uniform (PLF)	Top	8' 2.25"	9' 5.81"		190		71		Live
Replacement Uniform (PLF)	Top	9' 5.81"	10' 5.00"		190		79		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	3198#	--
2	10' 5.000"	Wall	N/A	N/A	1.500"	2165#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	1588#	653#
2	1061#	459#

Design spans
9' 7.750"



Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	5976. #	35386. #	16%	4.73'	Total Load 1.25D+1.5L
Shear	2345. #	13815. #	16%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.0841"	0.3215"	L/999+	5.21'	Total Load D+L
LL Deflection	0.0592"	0.2411"	L/999+	5.21'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

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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

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Member Data

Description: CalcG2

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 11.8 PLF

Standard Load:

Live Load: 0 PLF

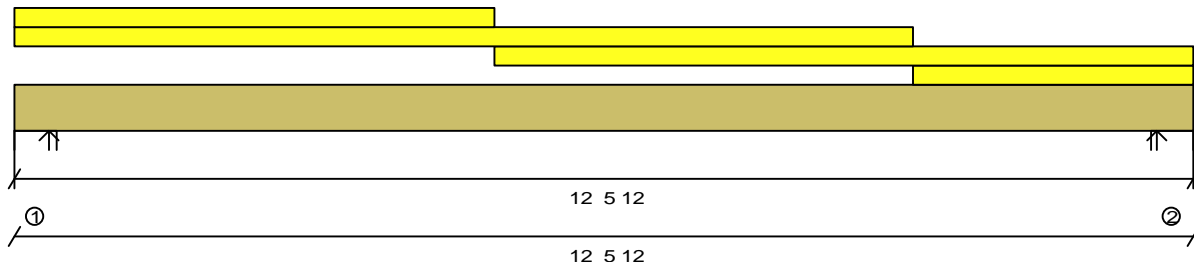
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	5' 1.00"		357		134		Live
Replacement Uniform (PLF)	Top	0' 0.00"	9' 6.00"		27		10		Live
Replacement Uniform (PLF)	Top	5' 1.00"	12' 5.75"		357		138		Live
Replacement Uniform (PLF)	Top	9' 6.00"	12' 5.75"		27		10		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	4521#	--
2	12' 5.750"	Wall	N/A	N/A	1.500"	4537#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	2247#	921#
2	2247#	934#

Design spans

11' 8.500"



Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	13264. #	35386. #	37%	6.24'	Total Load 1.25D+1.5L
Shear	3769. #	13815. #	27%	11.51'	Total Load 1.25D+1.5L
TL Deflection	0.2605"	0.3903"	L/539	6.24'	Total Load D+L
LL Deflection	0.1843"	0.2927"	L/762	6.24'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

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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

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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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on this drawing meets applicable design criteria for Loads, Loading Conditions, and Spans listed on this sheet.
al as required for approval. This design assumes product installation according to the manufacturer's specifications.

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