



FROM PLAN DATED: NOV 2015

BUILDER:
BAYVIEW WELLINGTON

SITE:
ALCONA SHORES

MODEL: S39-1

ELEVATION: A&B

LOT:

CITY: INNISFILL

SALESMAN: M D

DESIGNER: AJ

REVISION:

NOTES:

CERAMIC TILE APPLICATION
AS PER O.B.C. 9.30.6.

SQUASH BLOCKS

2x4 OR 2x6 #2 S.P.F. REQ'D UNDER
INTERIOR UNIFORM LOAD BEARING
WALLS.

MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS.

CANTILEVERED JOISTS

REQUIRE I-JOIST BLOCKING ALONG
BEARING AND RIMBOARD CLOSURE
AT ENDS.

REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

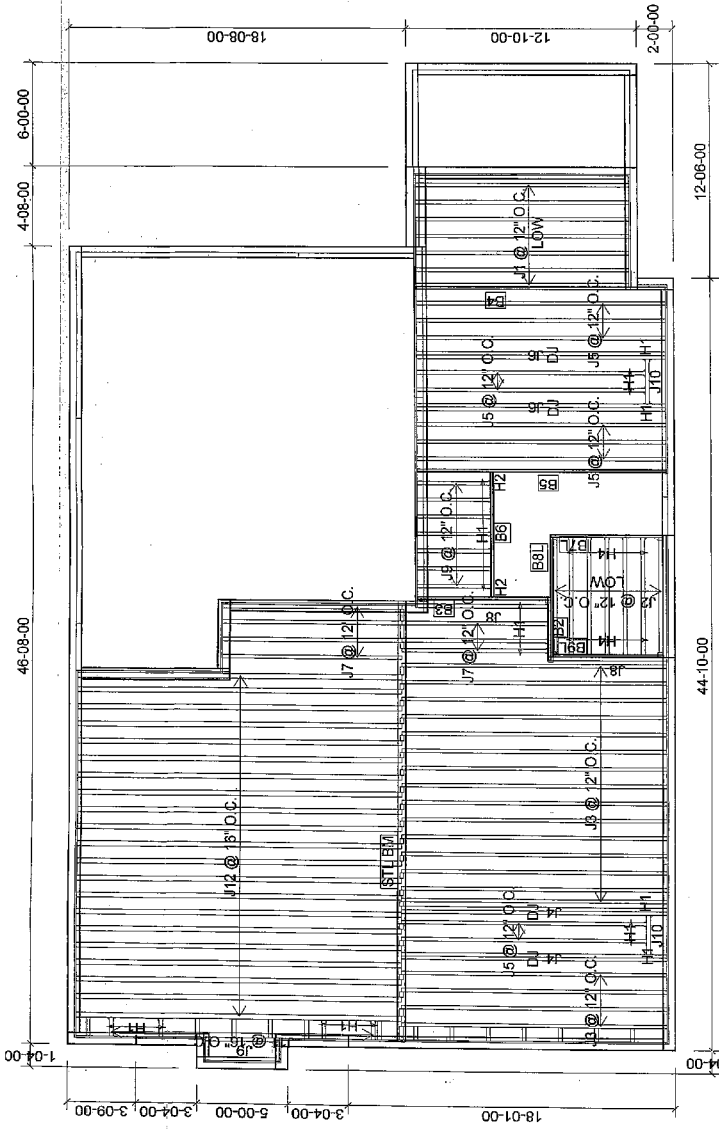
DEAD LOAD: 15.0 lb/ft

TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

1st FLOOR



Connector Summary		
Qty	Manuf	Product
11	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
2	H2	HUS1.81/11.88
10	H4	IUS2.56/9.5

Products		
PlotID	Length	Product
J1	12-00-00	9 1/2" NI-40x
J2	8-00-00	9 1/2" NI-40x
J3	16-00-00	11 7/8" NI-40x
J4	16-00-00	11 7/8" NI-40x
J5	14-00-00	11 7/8" NI-40x
J6	14-00-00	11 7/8" NI-40x
J7	10-00-00	11 7/8" NI-40x
J8	8-00-00	11 7/8" NI-40x
J9	6-00-00	11 7/8" NI-40x
J10	4-00-00	11 7/8" NI-40x
J11	2-00-00	11 7/8" NI-40x
J12	18-00-00	11 7/8" NI-80
B7L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B8L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B9L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B4	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B5	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B3	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B6	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B2	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Town of Innisfill Certified Model
07/03/2018 3:45:35 PM Agaveles



FROM PLAN DATED: NOV 2015

BUILDER:
BAYVIEW WELLINGTON

SITE:
ALCONA SHORES

MODEL: S39-1

ELEVATION: A&B

LOT:

CITY: INNISFILL

SALESMAN: M D

DESIGNER: AJ

REVISION:

NOTES:
CERAMIC TILE APPLICATION
AS PER O.B.C. 9.30.6.
SQUASH BLOCKS
2x4 OR 2x6 #2 S.P.F. REQ'D UNDER
INTERIOR UNIFORM LOAD BEARING
WALLS.

MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS.
CANTILEVERED JOISTS
REQUIRE JOIST BLOCKING ALONG
BEARING AND RIMBOARD CLOSURE
AT ENDS.

REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

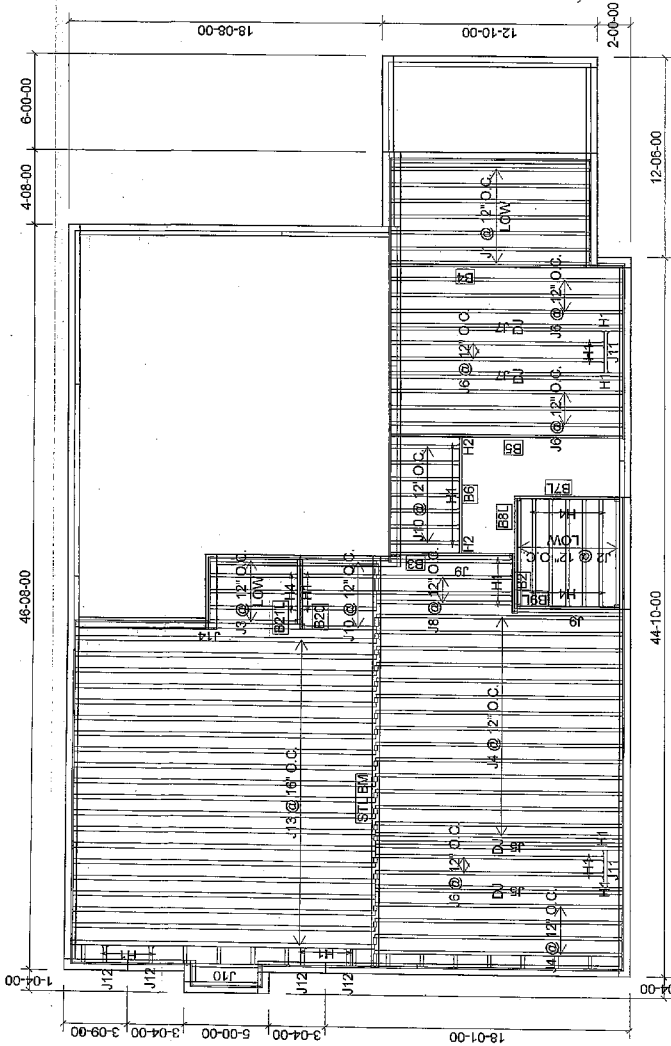
TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

1st FLOOR

WITH SUNKEN



Connector Summary		
Qty	Manuf	Product
14	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
2	H2	HUS1.81/11.88
13	H4	IUS2.56/9.5

Products		
PlotID	Length	Product
J1	12-00-00	9 1/2" NI-40x
J2	8-00-00	9 1/2" NI-40x
J3	6-00-00	9 1/2" NI-40x
J4	16-00-00	11 7/8" NI-40x
J5	16-00-00	11 7/8" NI-40x
J6	14-00-00	11 7/8" NI-40x
J7	14-00-00	11 7/8" NI-40x
J8	10-00-00	11 7/8" NI-40x
J9	8-00-00	11 7/8" NI-40x
J10	6-00-00	11 7/8" NI-40x
J11	4-00-00	11 7/8" NI-40x
J12	2-00-00	11 7/8" NI-40x
J13	18-00-00	11 7/8" NI-80
J14	14-00-00	11 7/8" NI-80
B7L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B8L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B9L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B21L	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
B4	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B5	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B3	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B6	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B20	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
B2	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Team of Inhabiti Certified Model
07/03/2018 3:45:48 PM legnals



FROM PLAN DATED: NOV 2015

BUILDER:
BAYVIEW WELLINGTON

SITE:
ALCONA SHORES
MODEL: S39-1

ELEVATION: A&B

LOT:
CITY: INNISFILL

SALESMAN: M D
DESIGNER: AJ
REVISION:

NOTES:

CERAMIC TILE APPLICATION
AS PER O.B.C. 9.30.6.

SQUASH BLOCKS
2x4 OR 2x6 #2 S.P.F. REQ'D UNDER
INTERIOR UNIFORM LOAD BEARING
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MULTIPLE SQUASH BLOCKS REQ'D
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CANTILEVERED JOISTS
REQUIRE I-JOIST BLOCKING ALONG
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AT ENDS.

REFER TO THE NORDIC
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STORAGE AND INSTALLATION.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft

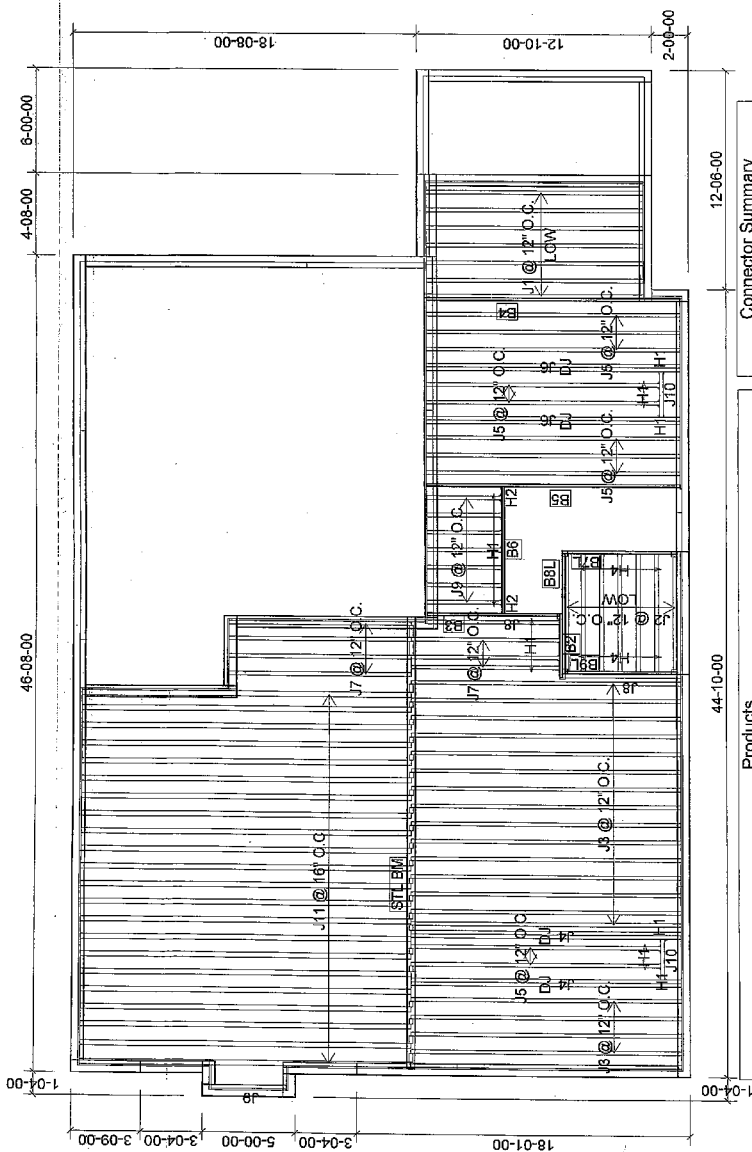
TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

1st FLOOR

WITH DECK



Connector Summary		
Qty	Manuf	Product
11	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
2	H2	HUS1.81/11.88
10	H4	IUS2.56/9.5

Products			Plies		Net Qty	
PlotID	Length	Product				
J1	12-00-00	9 1/2" NI-40x	1	1	7	
J2	8-00-00	9 1/2" NI-40x	1	1	7	
J3	16-00-00	11 7/8" NI-40x	1	1	20	
J4	16-00-00	11 7/8" NI-40x	2	4	4	
J5	14-00-00	11 7/8" NI-40x	1	1	10	
J6	14-00-00	11 7/8" NI-40x	2	4	4	
J7	10-00-00	11 7/8" NI-40x	1	1	7	
J8	8-00-00	11 7/8" NI-40x	1	1	2	
J9	8-00-00	11 7/8" NI-40x	1	1	8	
J10	4-00-00	11 7/8" NI-40x	1	1	2	
J11	18-00-00	11 7/8" NI-80	1	1	22	
B7L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B8L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B9L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B4	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B5	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B3	8-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B6	8-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1	1	
B2	4-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1	1	

Town of Innisfill Certified Model
07/03/2018 3:45:52 PM Jgreaves



FROM PLAN DATED: NOV 2015

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BAYVIEW WELLINGTON

SITE:
ALCONA SHORES

MODEL: S39-1

ELEVATION: A&B

LOT:

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SALESMAN: M D

DESIGNER: AJ

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CERAMIC TILE APPLICATION
AS PER O.B.C. 9.30.6.
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2x4 OR 2x6 #2 S.P.F. REQ'D UNDER
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LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

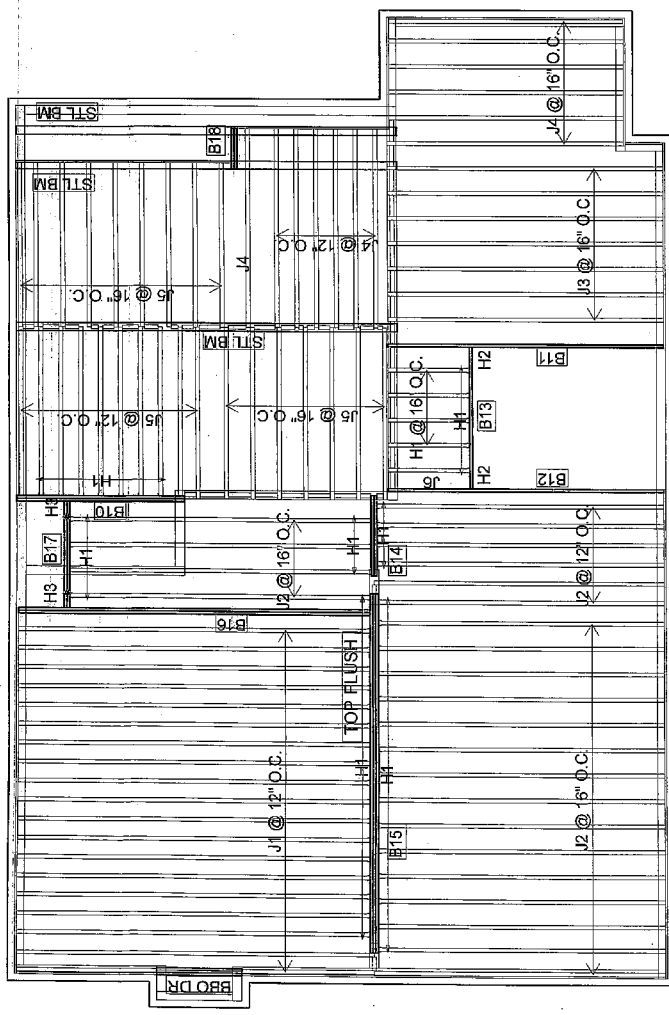
DEAD LOAD: 15.0 lb/ft

TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

2nd FLOOR



Connector Summary		
Qty	Manuf	Product
1	H1	IUS2.56/9.5
33	H1	IUS2.56/9.5
5	H1	IUS2.56/11.88
17	H1	IUS2.56/11.88
2	H2	HUS1.81/11.88
2	H3	HGUS410

Products		
PlotID	Length	Product
J1	18-00-00	11 7/8" NI-40x
J2	16-00-00	11 7/8" NI-40x
J3	14-00-00	11 7/8" NI-40x
J4	12-00-00	11 7/8" NI-40x
J5	10-00-00	11 7/8" NI-40x
H1	6-00-00	11 7/8" NI-40x
H2	6-00-00	11 7/8" NI-40x
H3	18-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B16	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B11	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B12	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B10	10-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B13	8-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B14	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B17	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B18	4-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP
B15	20-00-00	1-3/4" x 16" VERSA-LAM@ 2.0 3100 SP

Town of Innisfill Certified Model
07/03/2018 3:45:56 PM Jlgeneva



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B2(i2073)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:07

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B2(i2073)

Specifier:

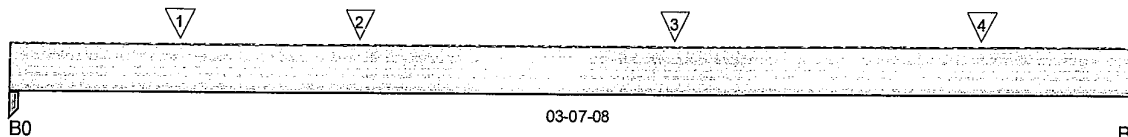
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:45:59 PM kgervais



Total Horizontal Product Length = 03-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	253 / 0	138 / 0		
B1, 3-1/2"	223 / 0	123 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	J8 (i2229)	Conc. Pt. (lbs)	L	00-06-09	00-06-09	109	55			n/a
2	J8 (i2215)	Conc. Pt. (lbs)	L	01-01-07	01-01-07	119	60			n/a
3	J8 (i2217)	Conc. Pt. (lbs)	L	02-01-07	02-01-07	151	75			n/a
4	J8 (i2060)	Conc. Pt. (lbs)	L	03-01-07	03-01-07	97	49			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	408 ft-lbs	19,364 ft-lbs	2.1%	1	02-01-07
End Shear	328 lbs	7,232 lbs	4.5%	1	01-03-06
Total Load Defl.	L/999 (0.001")	n/a	n/a	4	01-09-10
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	01-09-10
Max Defl.	0.001"	n/a	n/a	4	01-09-10
Span / Depth	3.2	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	552 lbs	13.9%	7.4%	Unspecified
B1 Post	3-1/2" x 1-3/4"	488 lbs	12.3%	6.5%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

DWG NO. TAM 44634-17
STRUCTURAL
COMPONENT ONLY





Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement/Flush Beams/B3(i2088)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:07

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports:

CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B3(i2088)

Specifier:

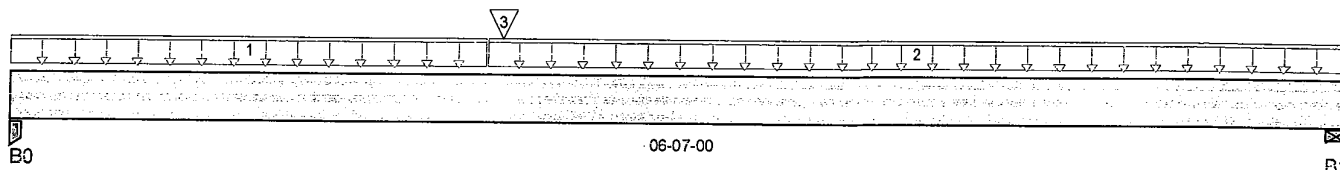
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:02 PM kgervais



Total Horizontal Product Length = 06-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	764 / 0	415 / 0		
B1, 4-3/8"	506 / 0	282 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	02-04-02	10	5			n/a
2 FC1 Floor Material	Unf. Lin. (lb/ft)	L	02-04-02	06-07-00	23	11			n/a
3 B6(i2070)	Conc. Pt. (lbs)	L	02-05-00	02-05-00	1,148	596			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,798 ft-lbs	19,364 ft-lbs	19.6%	1	02-05-00
End Shear	1,632 lbs	7,232 lbs	22.6%	1	01-01-10
Total Load Defl.	L/999 (0.031")	n/a	n/a	4	02-11-05
Live Load Defl.	L/999 (0.02")	n/a	n/a	5	02-11-05
Max Defl.	0.031"	n/a	n/a	4	02-11-05
Span / Depth	6.3	n/a	n/a		00-00-00

Disclosure

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Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-3/4" x 1-3/4"	1,665 lbs	83.7%	44.6%	Unspecified
B1 Wall/Plate	4-3/8" x 1-3/4"	1,110 lbs	33.9%	11.9%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

DWG NO. TAM 44635-17
STRUCTURAL
COMPONENT ONLY





Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B4(i3644)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 7, 2017 07:59:15

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B4(i3644)

Specifier:

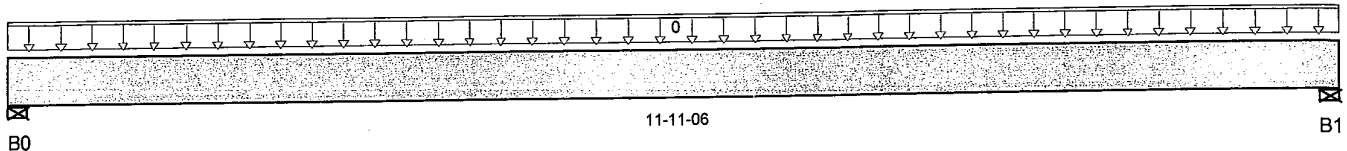
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:05 PM kgervais



Total Horizontal Product Length = 11-11-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	113 / 0	93 / 0		
B1, 4-3/8"	111 / 0	91 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
0 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-11-06	19	9	1.00	1.15	n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	749 ft-lbs	19,364 ft-lbs	3.9%	1	06-00-04
End Shear	217 lbs	7,232 lbs	3%	1	01-05-06
Total Load Defl.	L/999 (0.025")	n/a	n/a	4	06-00-04
Live Load Defl.	L/999 (0.014")	n/a	n/a	5	06-00-04
Max Defl.	0.025"	n/a	n/a	4	06-00-04
Span / Depth	11.4	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-1/2" x 1-3/4"	285 lbs	3.6%	2.4%	Unspecified
B1 Wall/Plate	4-3/8" x 1-3/4"	281 lbs	6.9%	3%	Unspecified

Notes

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

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

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.





Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B5(i2603)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B5(i2603)

Specifier:

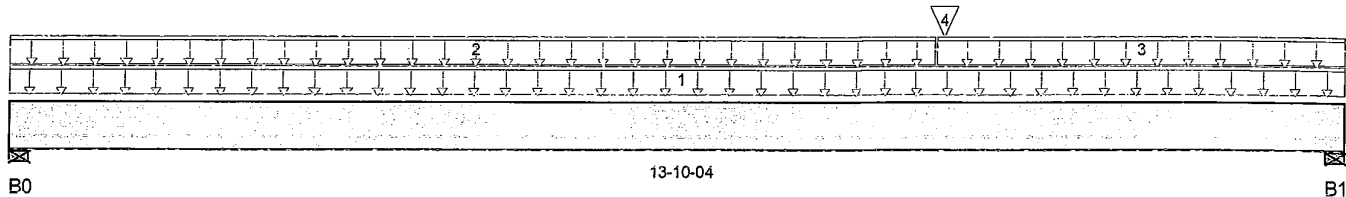
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:08 PM kgervais



Total Horizontal Product Length = 13-10-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 2-3/8"	454 / 0	274 / 0		
B1, 4-3/8"	978 / 0	546 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	13-10-04	14	7			n/a
2 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-07-06	3	1			n/a
3 FC1 Floor Material	Unf. Lin. (lb/ft)	L	09-07-06	13-10-04	14	7			n/a
4 B6(i2070)	Conc. Pt. (lbs)	L	09-08-04	09-08-04	1,147	595			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,724 ft-lbs	19,364 ft-lbs	39.9%	1	09-08-04
End Shear	2,058 lbs	7,232 lbs	28.5%	1	12-06-00
Total Load Defl.	L/549 (0.293")	0.671"	43.7%	4	07-06-01
Live Load Defl.	L/858 (0.188")	0.447"	42%	5	07-06-01
Max Defl.	0.293"	n/a	n/a	4	07-06-01
Span / Depth	13.6	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	2-3/8" x 1-3/4"	1,024 lbs	57.7%	20.2%	Unspecified
B1 Wall/Plate	4-3/8" x 1-3/4"	2,150 lbs	65.7%	23%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

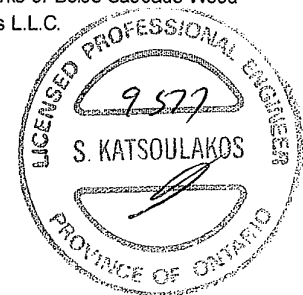
Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B6(i2070)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports:

CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B6(i2070)

Specifier:

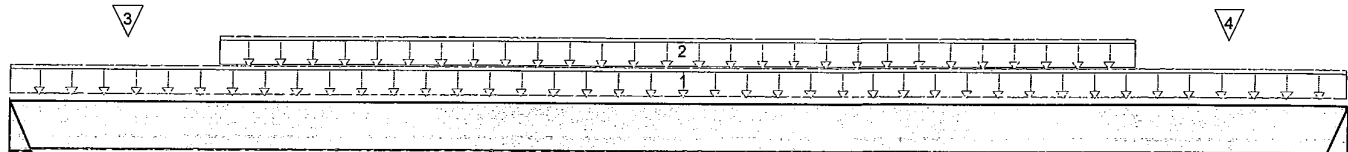
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:11 PM kgervais



B0

07-03-04

B1

Total Horizontal Product Length = 07-03-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	1,148 / 0	596 / 0		
B1	1,147 / 0	595 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 User Load	Unf. Lin. (lb/ft)	L	00-00-00	07-03-04	240	120			n/a
2 Smoothed Load	Unf. Lin. (lb/ft)	L	01-01-09	06-01-09	82	41			n/a
3 J9(i2068)	Conc. Pt. (lbs)	L	00-07-09	00-07-09	70	35			n/a
4 J9(i2104)	Conc. Pt. (lbs)	L	06-07-09	06-07-09	70	35			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,321 ft-lbs	19,364 ft-lbs	22.3%	1	03-07-09
End Shear	1,789 lbs	7,232 lbs	24.7%	1	01-01-14
Total Load Defl.	L/999 (0.056")	n/a	n/a	4	03-07-09
Live Load Defl.	L/999 (0.037")	n/a	n/a	5	03-07-09
Max Defl.	0.056"	n/a	n/a	4	03-07-09
Span / Depth	7.1	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	2,467 lbs	n/a	57.8%	Hanger
B1 Hanger	2" x 1-3/4"	2,465 lbs	n/a	57.7%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

DWG NO. TAM 4463B-17
 STRUCTURAL
 COMPONENT ONLY

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Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B7L(i2269)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B7L(i2269

Specifier:

Designer: AJ

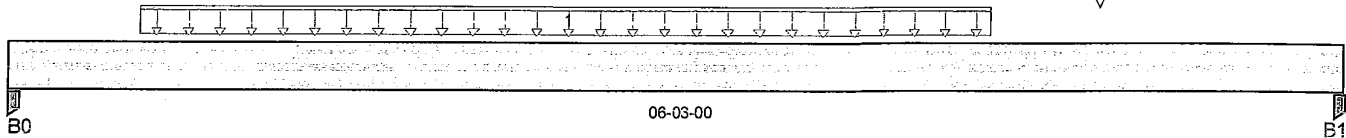
Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:14 PM kgervais

2



Total Horizontal Product Length = 06-03-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	351 / 0	191 / 0		
B1, 3-1/2"	342 / 0	185 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-07-04	04-07-04	140	70			n/a
2	J2(i2260)	Conc. Pt. (lbs)	L	05-01-04	05-01-04	133	66			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,279 ft-lbs	12,704 ft-lbs	10.1%	1	03-01-04
End Shear	759 lbs	5,785 lbs	13.1%	1	01-01-00
Total Load Defl.	L/999 (0.021")	n/a	n/a	4	03-01-04
Live Load Defl.	L/999 (0.014")	n/a	n/a	5	03-01-04
Max Defl.	0.021"	n/a	n/a	4	03-01-04
Span / Depth	7.3	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	766 lbs	19.2%	10.2%	Unspecified
B1 Post	3-1/2" x 1-3/4"	744 lbs	18.7%	10%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.





Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B8L(i1197)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B8L(i1197

Specifier:

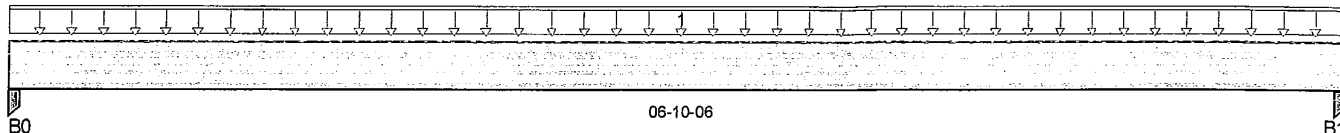
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:18 PM kgervais



Total Horizontal Product Length = 06-10-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	18 / 0	23 / 0		
B1, 1-3/4"	17 / 0	22 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	06-10-06	5	2			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	85 ft-lbs	12,704 ft-lbs	0.7%	1	03-06-01
End Shear	38 lbs	5,785 lbs	0.7%	1	01-01-00
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	03-06-01
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	03-06-01
Max Defl.	0.002"	n/a	n/a	4	03-06-01
Span / Depth	8.3	n/a	n/a		00-00-00

Disclosure

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Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	56 lbs	1.4%	0.7%	Unspecified
B1 Post	1-3/4" x 1-3/4"	53 lbs	2.7%	1.4%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

BWD NO. TAM 4464017
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B9L(i2254)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B9L(i2254

Specifier:

Designer: AJ

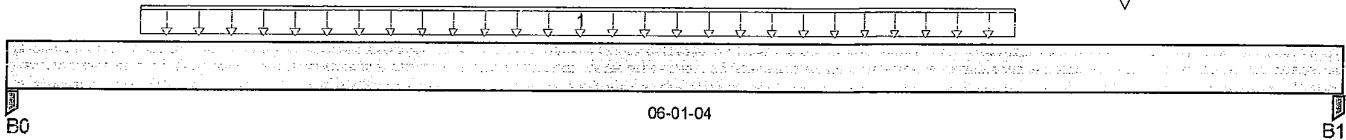
Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:22 PM kgervais

2



Total Horizontal Product Length = 06-01-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	351 / 0	191 / 0		
B1, 1-3/4"	342 / 0	185 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 Smoothed Load	Unf. Lin. (lb/ft)	L	00-07-04	04-07-04	140	70			n/a
2 J2(i2260)	Conc. Pt. (lbs)	L	05-01-04	05-01-04	133	66			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,279 ft-lbs	12,704 ft-lbs	10.1%	1	03-01-04
End Shear	759 lbs	5,785 lbs	13.1%	1	01-01-00
Total Load Defl.	L/999 (0.021")	n/a	n/a	4	03-01-04
Live Load Defl.	L/999 (0.014")	n/a	n/a	5	03-01-04
Max Defl.	0.021"	n/a	n/a	4	03-01-04
Span / Depth	7.3	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	766 lbs	19.2%	10.2%	Unspecified
B1 Post	1-3/4" x 1-3/4"	743 lbs	37.4%	19.9%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B10(i2122)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B10(i2122)

Specifier:

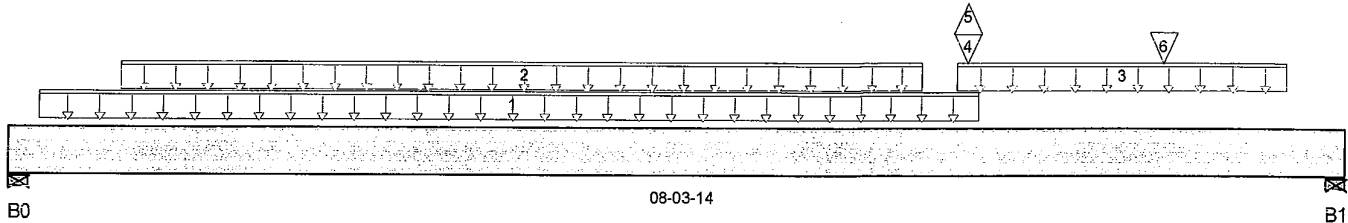
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:26 PM kgervais



Total Horizontal Product Length = 08-03-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	1,455 / 19	879 / 0	291 / 0	
B1, 4-3/8"	1,607 / 48	1,213 / 0	752 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-02-04	06-00-08	22	11			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-08-04	05-08-04	354	177			n/a
3	User Load	Unf. Lin. (lb/ft)	L	05-10-12	07-11-08		100			n/a
4	-	Conc. Pt. (lbs)	L	05-11-08	05-11-08	794	637	1,043		n/a
5	-	Conc. Pt. (lbs)	L	05-11-08	05-11-08	-67				n/a
6	J1(i2465)	Conc. Pt. (lbs)	L	07-02-04	07-02-04	354	177			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	8,085 ft-lbs	38,727 ft-lbs	20.9%	1	05-02-04
End Shear	3,975 lbs	14,464 lbs	27.5%	1	06-11-10
Total Load Defl.	L/999 (0.064")	n/a	n/a	58	04-03-12
Live Load Defl.	L/999 (0.041")	n/a	n/a	85	04-03-12
Max Defl.	0.064"	n/a	n/a	58	04-03-12
Span / Depth	7.7	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-1/2" x 3-1/2"	3,426 lbs	41.7%	14.6%	Unspecified
B1 Wall/Plate	4-3/8" x 3-1/2"	4,302 lbs	65.8%	23%	Unspecified

Notes





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B10(i2122)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:08

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B10(i2122

Specifier:

Designer: AJ

Company:

Misc:

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

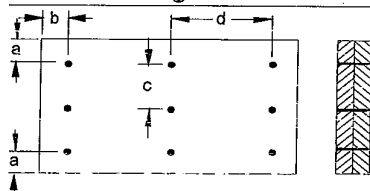
CONFORMS TO OBC 2012

Disclosure

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Connection Diagram



a minimum = 2" c = 3-15/16"
b minimum = 3" d = 4"

Calculated Side Load = 655.0 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Nails - 3-

3 1/2" ARDOX SPIRAL



DWG NO. TAM 44642-17

**STRUCTURAL
COMPONENT ONLY**



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B11(i2123)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:09

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B11(i2123)

Specifier:

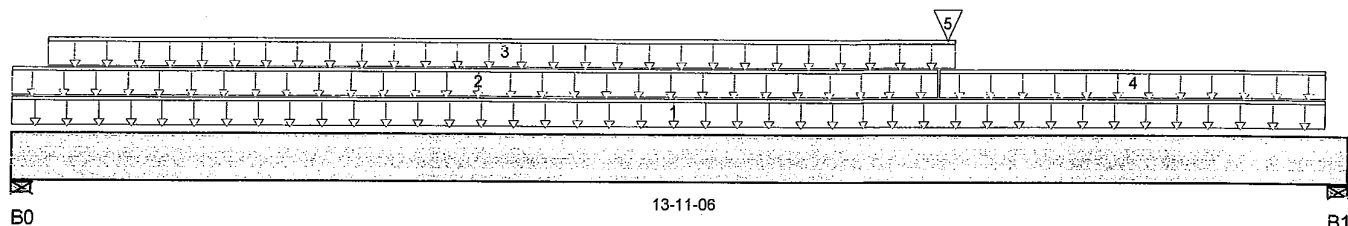
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:31 PM kgervais



Total Horizontal Product Length = 13-11-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	486 / 0	654 / 0		
B1, 5-1/2"	937 / 0	733 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	13-08-10	28	14			n/a
2 FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-08-02	3				n/a
3 User Load	Unf. Lin. (lb/ft)	L	00-04-06	09-10-04		60			n/a
4 FC4 Floor Material	Unf. Lin. (lb/ft)	L	09-08-02	13-08-10	26	13			n/a
5 B13(i2133)	Conc. Pt. (lbs)	L	09-09-00	09-09-00	913	479			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,873 ft-lbs	19,364 ft-lbs	40.7%	1	09-09-00
End Shear	2,174 lbs	7,232 lbs	30.1%	1	12-06-00
Total Load Defl.	L/472 (0.337")	0.662"	50.9%	4	07-04-00
Live Load Defl.	L/931 (0.171")	0.442"	38.7%	5	07-05-09
Max Defl.	0.337"	n/a	n/a	4	07-04-00
Span / Depth	13.4	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4-3/8" x 1-3/4"	1,546 lbs	47.3%	16.5%	Unspecified
B1 Wall/Plate	5-1/2" x 1-3/4"	2,323 lbs	56.5%	19.8%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA086.

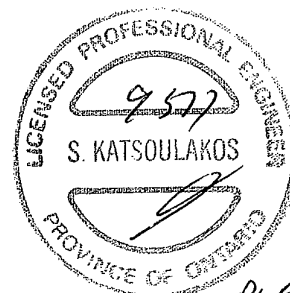
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012



BWB NO. TAM 4464317
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B11(i2123)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:09

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B11(i2123

Specifier:

Designer: AJ

Company:

Misc:

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B12(i2144)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:09

Build 4340

Job Name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12472-R

File Name:

Description: Designs\Flush Beams\1st Floor\Flush Beams\B12(i2144)

Specifier:

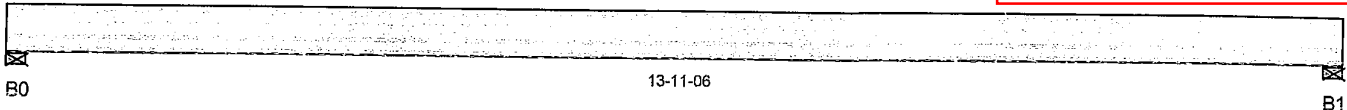
Designer:

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:37 PM kgervais



Total Horizontal Product Length = 13-11-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	283 / 0	552 / 0		
B1, 5-1/2"	535 / 0	531 / 0		

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,894 ft-lbs	19,364 ft-lbs	25.3%	1	09-01-14
End Shear	1,357 lbs	7,232 lbs	18.8%	1	12-06-00
Total Load Defl.	L/708 (0.225")	0.662"	33.9%	4	07-02-07
Live Load Defl.	L/999 (0.096")	n/a	n/a	5	07-05-09
Max Defl.	0.225"	n/a	n/a	4	07-02-07
Span / Depth	13.4	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4-3/8" x 1-3/4"	773 lbs	36.3%	12.7%	Unspecified
B1 Wall/Plate	5-1/2" x 1-3/4"	1,466 lbs	35.6%	12.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor: Normal Part code: Part 9
 Deflections less than 1/8" were ignored in the results.

CONFORMS TO CBC 2012

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



DWG NO. TAM 44644-17
 STRUCTURAL
 COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B13(i2133)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:09

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B13(i2133)

Specifier:

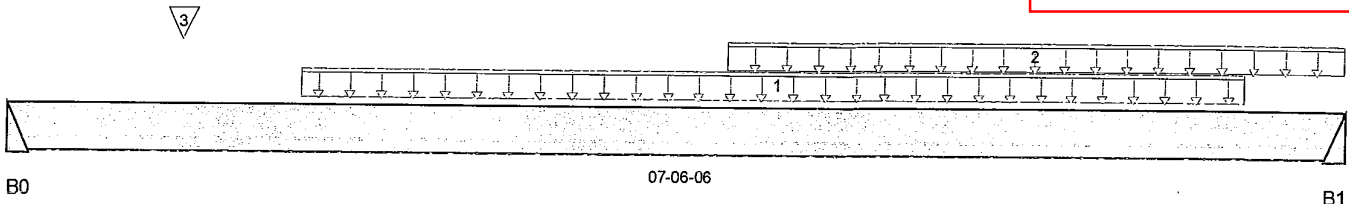
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:40 PM kgervais



Total Horizontal Product Length = 07-06-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	467 / 0	256 / 0		
B1	919 / 0	482 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-07-12	06-11-12	84	42	1.00	1.15	n/a
2	User Load	Unf. Lin. (lb/ft)	L	04-00-06	07-06-06	240	120			n/a
3	J5(i2426)	Conc. Pt. (lbs)	L	00-11-12	00-11-12	100	50			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,889 ft-lbs	19,364 ft-lbs	14.9%	1	04-07-08
End Shear	1,382 lbs	7,232 lbs	19.1%	1	06-04-08
Total Load Defl.	L/999 (0.039")	n/a	n/a	4	03-11-03
Live Load Defl.	L/999 (0.025")	n/a	n/a	5	03-11-03
Max Defl.	0.039"	n/a	n/a	4	03-11-03
Span / Depth	7.4	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	1,021 lbs	n/a	23.9%	Hanger
B1 Hanger	2" x 1-3/4"	1,981 lbs	n/a	46.4%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

DWG NO. TAM 44645-17
 STRUCTURAL
 COMPONENT ONLY





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \B14(i2337)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:09

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B14(i2337;

Specifier:

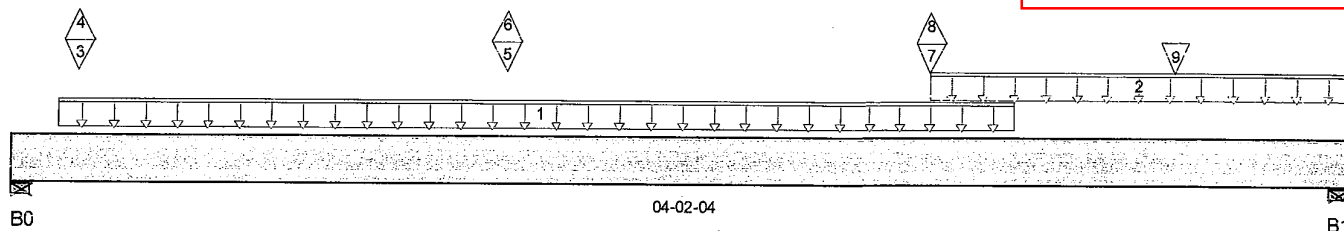
Designer: AJ

Company:

Msc:

Town of Innisfill Certified Model

07/03/2018 3:46:42 PM kgervais



Total Horizontal Product Length = 04-02-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	1,014 / 8	524 / 0		
B1, 2-3/4"	811 / 8	426 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.16	Trib.
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-01-12	03-01-12	291	145			n/a
2	FC 4 Floor Material	Unf. Lin. (lb/ft)	L	02-10-08	04-02-04	35	17			n/a
3	J2(i2423)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	219	105			n/a
4	J2(i2423)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	-1				n/a
5	J2(i2424)	Conc. Pt. (lbs)	L	01-06-08	01-06-08	224	108			n/a
6	J2(i2424)	Conc. Pt. (lbs)	L	01-06-08	01-06-08	-8				n/a
7	J2(i2425)	Conc. Pt. (lbs)	L	02-10-08	02-10-08	200	97			n/a
8	J2(i2425)	Conc. Pt. (lbs)	L	02-10-08	02-10-08	-7				n/a
9	J2(i2473)	Conc. Pt. (lbs)	L	03-07-12	03-07-12	263	131			n/a

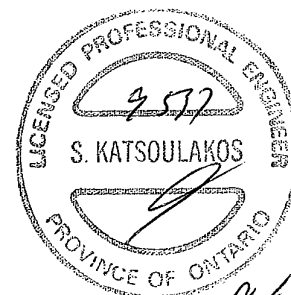
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,670 ft-lbs	38,727 ft-lbs	4.3%	1	01-07-12
End Shear	1,272 lbs	14,464 lbs	8.8%	1	01-03-14
Total Load Defl.	L/999 (0.003")	n/a	n/a	6	02-01-12
Live Load Defl.	L/999 (0.002")	n/a	n/a	8	02-01-12
Max Defl.	0.003"	n/a	n/a	6	02-01-12
Span / Depth	3.8	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	2,175 lbs	36.4%	12.7%	Unspecified
B1 Wall/Plate	2-3/4" x 3-1/2"	1,749 lbs	42.5%	14.9%	Unspecified

Notes



P6/L

DWG NO. TAM 4464617
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...\B14(i2337)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:09

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B14(i2337)

Specifier:

Designer: AJ

Company:

Msc:

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

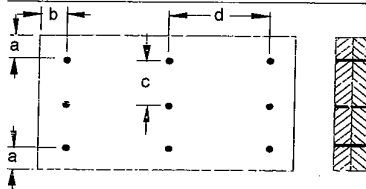
Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012

Connection Diagram



a minimum = 2" c = 3-15/16"
b minimum = 3" d = 4"

Calculated Side Load = 596.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Nails 3-1/2 in.

3 1/2" ARDOX SPIRAL

Disclosure

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poz

DWG NO. TAM 4464617
STRUCTURAL
COMPONENT ONLY



Triple 1-3/4" x 16" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B15 (i3574)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 19, 2016 11:03:18

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B15 (i3574

Specifier:

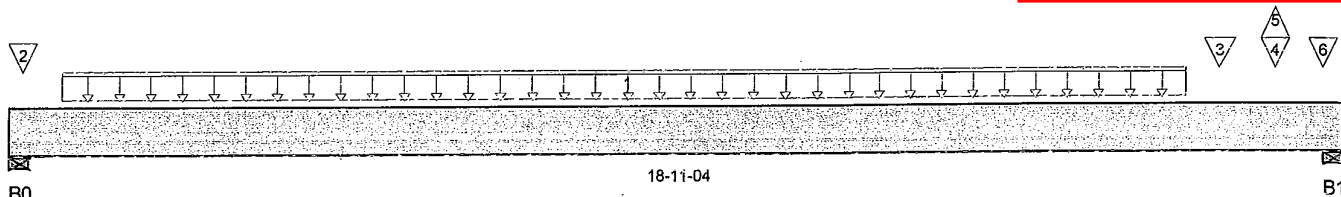
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:45 PM kgervais



Total Horizontal Product Length = 18-11-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 6-1/2"	6,097 / 0	3,284 / 0	2 / 0	
B1, 6-3/4"	6,335 / 13	3,523 / 0	75 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-09-00	16-09-00	648	324			n/a
2	J2(i3659)	Conc. Pt. (lbs)	L	00-02-04	00-02-04	361	180			n/a
3	-	Conc. Pt. (lbs)	L	17-02-06	17-02-06	709	354			n/a
4	B16(i3488)	Conc. Pt. (lbs)	L	17-11-08	17-11-08	364	307	77		n/a
5	B16(i3488)	Conc. Pt. (lbs)	L	17-11-08	17-11-08	-13				n/a
6	-	Conc. Pt. (lbs)	L	18-07-11	18-07-11	634	318			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	56,850 ft-lbs	106,103 ft-lbs	53.6%	1	09-05-00
End Shear	11,625 lbs	29,232 lbs	39.8%	1	01-10-08
Total Load Defl.	L/331 (0.651")	0.898"	72.5%	58	09-05-00
Live Load Defl.	L/509 (0.423")	0.599"	70.7%	85	09-05-00
Max Defl.	0.651"	n/a	n/a	58	09-05-00
Span / Depth	13.5	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	6-1/2" x 5-1/4"	13,251 lbs	72.7%	31.8%	Unspecified
B1 Wall/Plate	6-3/4" x 5-1/4"	13,945 lbs	73.7%	32.3%	Unspecified

Notes



pc/L

DWG NO. TAM 44627-17
STRUCTURAL
COMPONENT ONLY



Triple 1-3/4" x 16" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B15 (i3574)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 19, 2016 11:03:18

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B15 (i35

Specifier:

Designer: AJ

Company:

Msc:

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

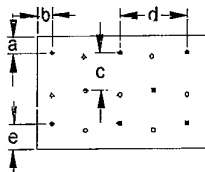
CONFORMS TO OBC 2012

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Connection Diagram



a minimum = 1/2"
b minimum = 3"
c = 6 1/2"
d = 8"
e minimum = 2"

Calculated Side Load = 799.1 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nailing schedule applies to both sides of the member.

Connectors are: 16d Nails (0.148 in.) - 3-1/4 in.

3 1/2" ARDOX SPIRAL





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B16(i2112)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:10

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B16(i2112)

Specifier:

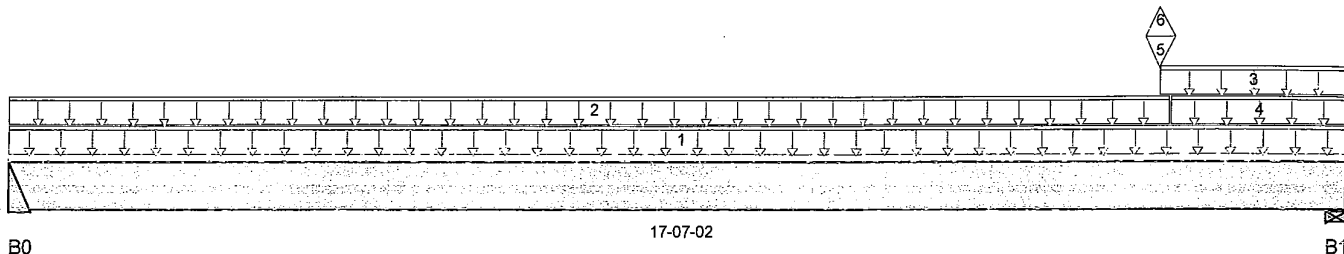
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:47 PM kgervais



B0

17-07-02

B1

Total Horizontal Product Length = 17-07-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	360 / 13	307 / 0	83 / 0	
B1, 4-3/8"	672 / 96	738 / 0	586 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	17-07-02	20	10			n/a
2	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	15-03-12	16	8			n/a
3	User Load	Unf. Lin. (lb/ft)	L	15-02-00	17-07-02		100			n/a
4	FC4 Floor Material	Unf. Lin. (lb/ft)	L	15-03-12	17-07-02	6				n/a
5	B17(i2121)	Conc. Pt. (lbs)	L	15-02-00	15-02-00	432	290	669		n/a
6	B17(i2121)	Conc. Pt. (lbs)	L	15-02-00	15-02-00	-109				n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,064 ft-lbs	38,727 ft-lbs	13.1%	1	10-09-07
End Shear	1,960 lbs	14,464 lbs	13.6%	1	16-02-14
Total Load Defl.	L/983 (0.21")	0.859"	24.4%	58	09-03-01
Live Load Defl.	L/999 (0.123")	n/a	n/a	85	09-03-01
Max Defl.	0.21"	n/a	n/a	58	09-03-01
Span / Depth	17.4	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	966 lbs	n/a	11.3%	Hanger
B1 Wall/Plate	4-3/8" x 3-1/2"	2,223 lbs	34%	11.9%	Unspecified

Notes



pc 14

DWG NO. TAM 4462B-17
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...IB16(i2112)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:10

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\IB16(i2112)

Specifier:

Designer: AJ

Company:

Misc:

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

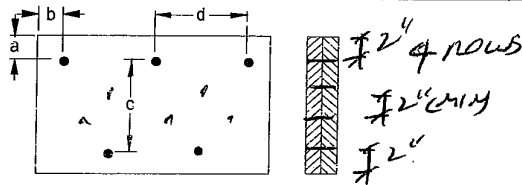
CONFORMS TO OBC 2012

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 8"

Calculated Side Load = 107.7 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: Nails

3 1/2" ARDOX SPIRAL





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B17(i2121)

BC CALC® Design Report



Dry | 2 spans | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:10

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B17(i2121)

Specifier:

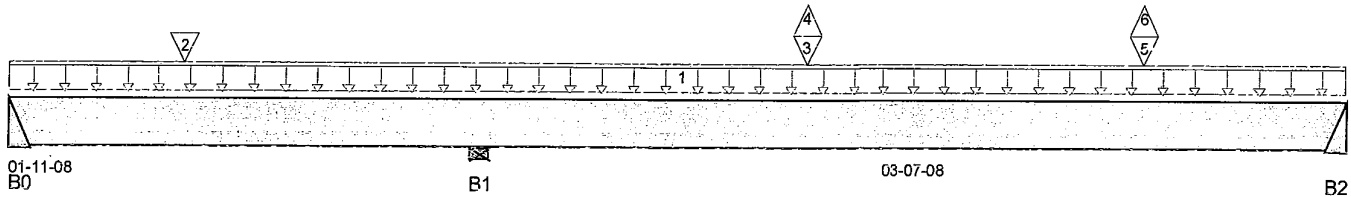
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:49 PM kgervais



Total Horizontal Product Length = 05-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	510 / 108	331 / 0	838 / 0	
B1, 5-1/2"	689 / 101	851 / 0	1,286 / 0	
B2	452 / 87	481 / 0	1,114 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	User Load	Unf. Lin. (lb/ft)	L	00-00-00	05-07-00		100			n/a
2	-	Conc. Pt. (lbs)	L	00-08-13	00-08-13	772	566	1,560		n/a
3	J2(i2424)	Conc. Pt. (lbs)	L	03-03-12	03-03-12	149	39			n/a
4	J2(i2424)	Conc. Pt. (lbs)	L	03-03-12	03-03-12	-71				n/a
5	-	Conc. Pt. (lbs)	L	04-08-15	04-08-15	575	433	1,560		n/a
6	-	Conc. Pt. (lbs)	L	04-08-15	04-08-15	-70				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,773 ft-lbs	38,727 ft-lbs	4.6%	88	04-09-00
Neg. Moment	-1,276 ft-lbs	-38,727 ft-lbs	3.3%	65	01-11-08
Neg. Moment	-1,276 ft-lbs	-38,727 ft-lbs	3.3%	65	01-11-08
End Shear	1,314 lbs	14,464 lbs	9.1%	88	04-05-02
Cont. Shear	1,791 lbs	14,464 lbs	12.4%	65	00-08-14
Total Load Defl.	L/999 (0.002")	n/a	n/a	198	04-01-06
Live Load Defl.	L/999 (0.001")	n/a	n/a	265	04-01-12
Total Neg. Defl.	L/999 (-0")	n/a	n/a	163	01-05-12
Max Defl.	0.002"	n/a	n/a	198	04-01-06
Span / Depth	3.6	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	1,926 lbs	n/a	22.5%	Hanger
B1 Wall/Plate	5-1/2" x 3-1/2"	3,338 lbs	40.6%	14.2%	Unspecified
B2 Hanger	2" x 3-1/2"	2,499 lbs	n/a	29.3%	Hanger

Notes





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B17(i2121)

Dry | 2 spans | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:10

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B17(i2121

Specifier:

Designer: AJ

Company:

Misc:

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

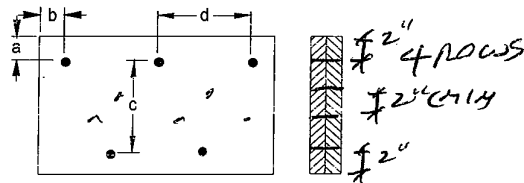
Disclosure

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CONFORMS TO CBC 2012

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 8"

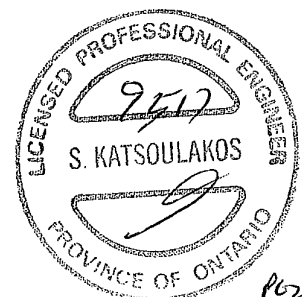
Calculated Side Load = 187.3 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 1 - Nails

3 1/2" ARDOX SPIRAL

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DWG NO. TAM 44629-17
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...\B18(i2098)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:10

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B18(i2098)

Specifier:

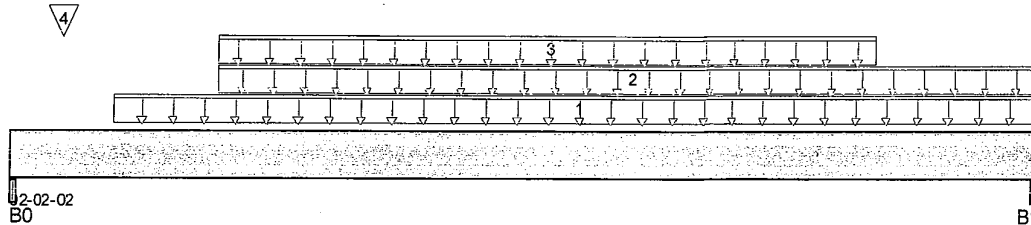
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:51 PM kgervais



Total Horizontal Product Length = 02-02-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/4"	47 / 0	116 / 0	82 / 0	
B1, 4-1/8"	50 / 0	117 / 0	81 / 0	

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-02-10	02-02-02	20	10			n/a
2 FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	02-02-02	6	3			n/a
3 User Load	Unf. Lin. (lb/ft)	L	00-05-04	01-10-00	33	130	117		n/a
4 FC4 Floor Material	Conc. Pt. (lbs)	L	00-01-05	00-01-05	1				n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	115 ft-lbs	38,727 ft-lbs	0.3%	13	01-01-10
End Shear	116 lbs	14,464 lbs	0.8%	13	01-05-02
Span / Depth	1.5	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Beam	5-1/4" x 3-1/2"	291 lbs	3.7%	1.3%	Unspecified
B1 Beam	4-1/8" x 3-1/2"	293 lbs	4.7%	1.7%	Unspecified

Notes

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012



P61/L

DWG NO. TAM 4463017
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B18(i2098)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 14:29:10

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports:

CCMC 12472-R

File Name: S39-1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B18(i2098)

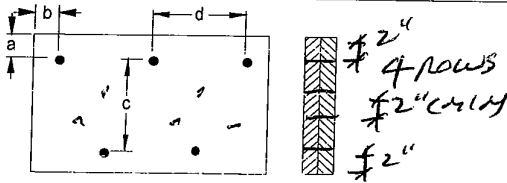
Specifier:

Designer: AJ

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Member has no side loads.

Connectors are: 16d Nails

3 1/2" ARDOX SPIRAL

Disclosure

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for

DWG NO. TAM 4463217

STRUCTURAL

COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B20(i3172)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 16:02:43

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1 SUNKEN.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B20(i3172

Specifier:

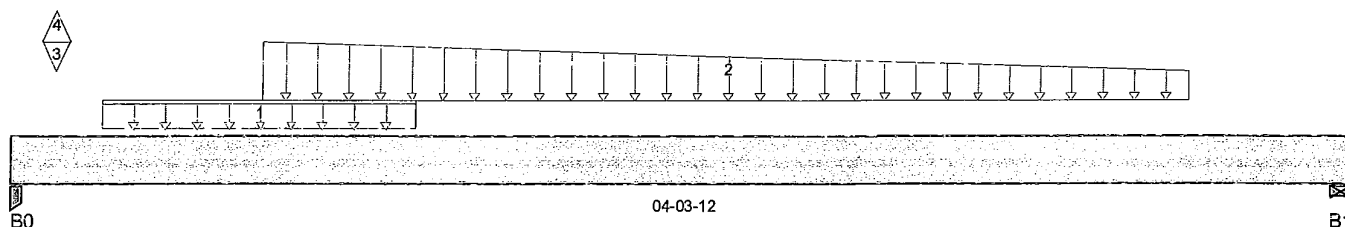
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

07/03/2018 3:46:53 PM kgervais



Total Horizontal Product Length = 04-03-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	215 / 2	121 / 0		
B1, 4-3/8"	151 / 0	88 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	01-03-10	12	6			n/a
2	Smoothed Load	Trapezoidal (lb/ft)	L	00-09-10	03-09-10	101	51			n/a
						84	41			n/a
3	J13(i3175)	Conc. Pt. (lbs)	L	00-01-12	00-01-12	77	39			n/a
4	J13(i3175)	Conc. Pt. (lbs)	L	00-01-12	00-01-12	-2				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	375 ft-lbs	19,364 ft-lbs	1.9%	1	02-03-10
End Shear	275 lbs	7,232 lbs	3.8%	1	01-03-06
Total Load Defl.	L/999 (0.001")	n/a	n/a	6	02-01-06
Live Load Defl.	L/999 (0.001")	n/a	n/a	8	02-01-06
Max Defl.	0.001"	n/a	n/a	6	02-01-06
Span / Depth	3.8	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	473 lbs	9.5%	6.3%	Unspecified
B1 Wall/Plate	4-3/8" x 1-3/4"	336 lbs	8.2%	3.6%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

Page 1 of 2

CONFORMS TO OBC 2012



DWG NO. TAM 44631-17
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B20(i3172)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope(deg)

September 16, 2016 16:02:43

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1 SUNKEN.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B20(i31

Specifier:

Designer: AJ

Company:

Misc:

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\...\B21L(i3378)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 16:02:43

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1 SUNKEN.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B21L(i337

Specifier:

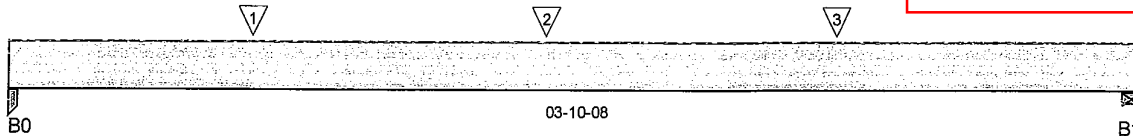
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:55 PM kgervais



Total Horizontal Product Length = 03-10-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	154 / 0	67 / 0		
B1, 4-3/8"	154 / 0	68 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	J3(i3390)	Conc. Pt. (lbs)	L	00-10-00	00-10-00	103	39			n/a
2	J3(i3387)	Conc. Pt. (lbs)	L	01-10-00	01-10-00	104	39			n/a
3	J3(i3391)	Conc. Pt. (lbs)	L	02-10-00	02-10-00	101	38			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	338 ft-lbs	12,704 ft-lbs	2.7%	1	01-10-00
End Shear	282 lbs	5,785 lbs	4.9%	1	00-11-04
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	01-10-00
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	01-10-00
Max Defl.	0.002"	n/a	n/a	4	01-10-00
Span / Depth	4.4	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-3/4" x 1-3/4"	315 lbs	12.7%	8.4%	Unspecified
B1 Wall/Plate	4-3/8" x 1-3/4"	315 lbs	7.7%	3.4%	Unspecified

Notes

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

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

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

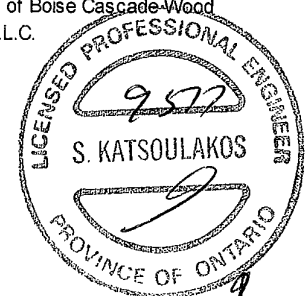
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012



DWONG YAM 44632-17
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\...\B22L(i3379)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

September 16, 2016 16:02:43

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-1 SUNKEN.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B22L(i337

Specifier:

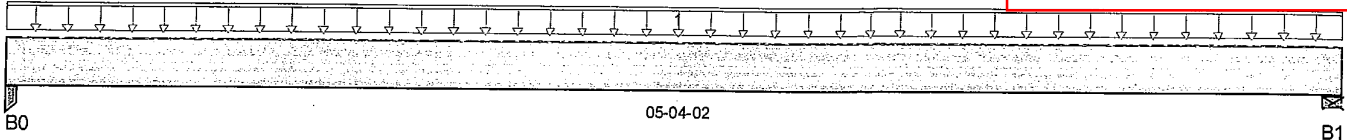
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

07/03/2018 3:46:57 PM kgervais



Total Horizontal Product Length = 05-04-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	52 / 0	32 / 0		
B1, 4-3/8"	53 / 0	33 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 FC5 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-04-02	20	7	1.00	1.15	n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	129 ft-lbs	12,704 ft-lbs	1%	1	02-07-10
End Shear	69 lbs	5,785 lbs	1.2%	1	01-01-00
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	02-07-10
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	02-07-10
Max Defl.	0.002"	n/a	n/a	4	02-07-10
Span / Depth	6.1	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

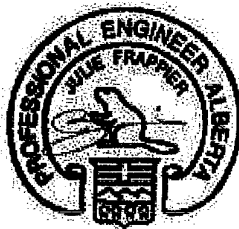
	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	117 lbs	2.4%	1.6%	Unspecified
B1 Wall/Plate	4-3/8" x 1-3/4"	121 lbs	3%	1.3%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor: Normal Part code: Part 9
 Deflections less than 1/8" were ignored in the results.

CONFORMS TO OBC 2012





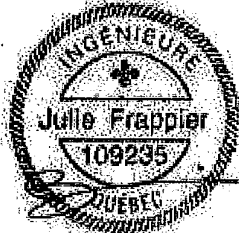
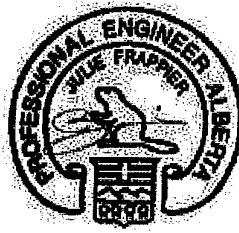
Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf
 Simple Spans, L/480 Deflection Limit
 3/4" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-9"	17'-5"	16'-5"	15'-10"	15'-2"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-6"	16'-7"	15'-11"	15'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"	15'-11"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-10"	16'-10"	16'-2"	15'-6"	18'-6"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-6"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
14"	NI-40x	21'-5"	19'-10"	18'-11"	17'-11"	22'-1"	20'-6"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
16"	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-70	20'-0"	18'-7"	17'-9"	16'-7"	20'-5"	18'-11"	17'-10"	16'-7"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
	NI-60	22'-1"	20'-7"	19'-7"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-70	23'-4"	21'-8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"
	NI-80	23'-7"	21'-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"
	NI-90x	24'-3"	22'-6"	21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"
14"	NI-40x	24'-5"	22'-9"	21'-8"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"
	NI-60	24'-10"	23'-1"	22'-0"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-70	26'-1"	24'-3"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"
	NI-80	26'-6"	24'-7"	23'-5"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90x	27'-3"	25'-4"	24'-1"	22'-9"	27'-9"	25'-11"	24'-8"	23'-4"
16"	NI-60	27'-3"	25'-5"	24'-2"	22'-10"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-70	28'-8"	26'-8"	25'-4"	23'-11"	29'-3"	27'-4"	26'-1"	24'-8"
	NI-80	29'-1"	27'-0"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90x	29'-11"	27'-10"	26'-6"	25'-0"	30'-6"	28'-5"	27'-2"	25'-8"

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



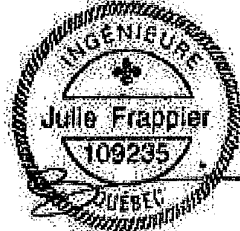
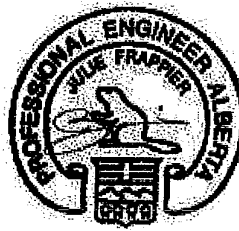
Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf
Simple Spans, L/480 Deflection Limit
5/8" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
14"	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
16"	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-8"	15'-3"	14'-5"	N/A	16'-8"	15'-3"	14'-5"	N/A
	NI-40x	17'-11"	16'-11"	16'-1"	N/A	18'-5"	17'-1"	16'-1"	N/A
	NI-60	18'-2"	17'-1"	16'-4"	N/A	18'-7"	17'-4"	16'-4"	N/A
	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A
	NI-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A
11-7/8"	NI-20	19'-6"	18'-1"	17'-3"	N/A	19'-11"	18'-3"	17'-3"	N/A
	NI-40x	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	19'-2"	N/A
	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-5"	20'-5"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-8"	N/A
14"	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-11"	20'-11"	N/A	24'-3"	22'-7"	21'-7"	N/A
	NI-60	24'-0"	22'-3"	21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
16"	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	25'-3"	24'-2"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



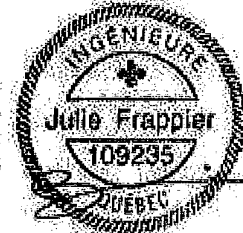
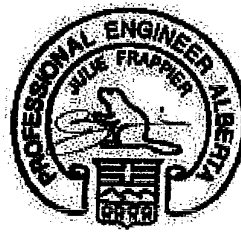
Maximum Floor Spans

Live Load = 40 psf, Dead Load = 30 psf
 Simple Spans, L/480 Deflection Limit
 5/8" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
14"	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
16"	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	17'-9"	16'-1"	15'-1"	N/A	17'-9"	16'-1"	15'-1"	N/A
	NI-60	18'-1"	16'-4"	15'-4"	N/A	18'-1"	16'-4"	15'-4"	N/A
	NI-70	19'-2"	17'-10"	16'-9"	N/A	19'-7"	17'-10"	16'-9"	N/A
	NI-80	19'-5"	18'-0"	17'-1"	N/A	19'-10"	18'-3"	17'-1"	N/A
11-7/8"	NI-20	18'-9"	17'-0"	16'-0"	N/A	18'-9"	17'-0"	16'-0"	N/A
	NI-40x	21'-0"	19'-3"	17'-9"	N/A	21'-3"	19'-3"	17'-9"	N/A
	NI-60	21'-4"	19'-8"	18'-5"	N/A	21'-8"	19'-8"	18'-5"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-4"	20'-0"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-5"	N/A
14"	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-5"	19'-6"	N/A	24'-1"	21'-5"	19'-6"	N/A
	NI-60	24'-0"	22'-3"	21'-0"	N/A	24'-8"	22'-5"	21'-0"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-9"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
16"	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	24'-10"	23'-4"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



Maximum Floor Spans

Live Load = 40 psf, Dead Load = 30 psf
Simple Spans, L/480 Deflection Limit
3/4" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-0"	16'-0"	15'-1"	13'-11"	17'-5"	16'-1"	15'-1"	13'-11"
	NI-60	17'-2"	16'-2"	15'-5"	14'-3"	17'-6"	16'-5"	15'-5"	14'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-6"	18'-5"	17'-3"	16'-7"	15'-6"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	15'-10"
11-7/8"	NI-20	17'-10"	16'-10"	16'-0"	14'-10"	18'-6"	17'-1"	16'-0"	14'-10"
	NI-40x	19'-4"	17'-11"	17'-3"	15'-10"	19'-11"	18'-6"	17'-9"	15'-10"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-1"
	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
14"	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	NI-40x	21'-5"	19'-10"	18'-11"	17'-5"	22'-1"	20'-6"	19'-6"	17'-5"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
16"	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-9"	16'-1"	15'-1"	13'-11"	17'-9"	16'-1"	15'-1"	13'-11"
	NI-60	18'-1"	16'-5"	15'-5"	14'-3"	18'-1"	16'-5"	15'-5"	14'-3"
	NI-70	19'-10"	17'-11"	16'-9"	15'-6"	19'-10"	17'-11"	16'-9"	15'-6"
	NI-80	20'-2"	18'-3"	17'-1"	15'-10"	20'-2"	18'-3"	17'-1"	15'-10"
11-7/8"	NI-20	18'-10"	17'-1"	16'-0"	14'-10"	18'-10"	17'-1"	16'-0"	14'-10"
	NI-40x	21'-3"	19'-3"	17'-9"	15'-10"	21'-3"	19'-3"	17'-9"	15'-10"
	NI-60	21'-9"	19'-8"	18'-5"	17'-1"	21'-9"	19'-8"	18'-5"	17'-1"
	NI-70	23'-4"	21'-5"	20'-1"	18'-6"	23'-8"	21'-5"	20'-1"	18'-6"
	NI-80	23'-7"	21'-10"	20'-5"	18'-11"	24'-1"	21'-10"	20'-5"	18'-11"
14"	NI-90x	24'-3"	22'-6"	21'-3"	19'-7"	24'-8"	22'-7"	21'-3"	19'-7"
	NI-40x	24'-2"	21'-5"	19'-6"	17'-5"	24'-2"	21'-5"	19'-6"	17'-5"
	NI-60	24'-9"	22'-5"	21'-0"	19'-6"	24'-9"	22'-5"	21'-0"	19'-6"
	NI-70	26'-1"	24'-3"	22'-9"	21'-0"	26'-8"	24'-3"	22'-9"	21'-0"
	NI-80	26'-6"	24'-7"	23'-3"	21'-6"	27'-1"	24'-10"	23'-3"	21'-6"
16"	NI-90x	27'-3"	25'-4"	24'-1"	22'-4"	27'-9"	25'-10"	24'-3"	22'-4"
	NI-60	27'-3"	24'-11"	23'-5"	21'-7"	27'-6"	24'-11"	23'-5"	21'-7"
	NI-70	28'-8"	26'-8"	25'-3"	23'-4"	29'-3"	26'-11"	25'-3"	23'-4"
	NI-80	29'-1"	27'-0"	25'-9"	23'-10"	29'-8"	27'-6"	25'-10"	23'-10"
	NI-90x	29'-11"	27'-10"	26'-6"	24'-10"	30'-6"	28'-5"	26'-11"	24'-10"

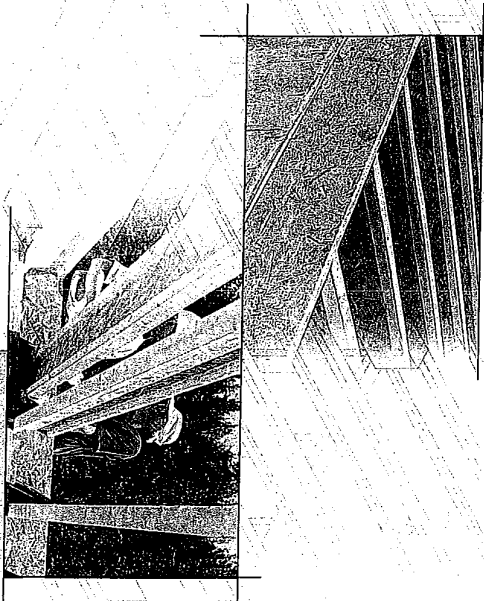
- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.

NORDIC

ENGINEERED WOOD



INSTALLATION GUIDE FOR RESIDENTIAL FLOORS



Distributed by:

N-C301 / November 2014

SAFETY AND CONSTRUCTION PRECAUTIONS



Do not walk on joists until fully fastened and braced, or serious injuries can result.



Never stack building materials over unsheathed I-joists. Once sheathed, do not over-stress I-joist with concentrated loads from building materials.

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Nordic I-joists, failure to follow allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.

WARNING

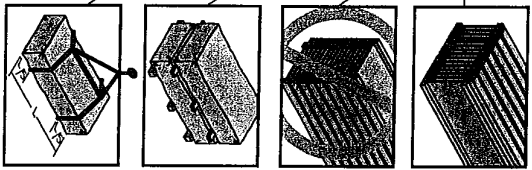
I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

Avoid Accidents by Following these Important Guidelines:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging at joist ends. When I-joists are applied continuous over interior supports and a load-bearing wall is planned at that location, blocking will be required at the interior support.
2. When the building is completed, the floor sheathing will provide lateral support for the top flanges of the I-joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent I-joist rollover or buckling.
 - Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on center, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.
 - Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the bay.
3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridging.
4. Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
5. Never install a damaged I-joist.

STORAGE AND HANDLING GUIDELINES

1. Bundle wrap can be slippery when wet. Avoid walking on wrapped bundles.
2. Store, stack, and handle I-joists vertically and level only.
3. Always stack and handle I-joists in the upright position only.
4. Do not store I-joists in direct contact with the ground and/or flatwise.
5. Protect I-joists from weather, and use spacers to separate bundles.
6. Bundled units should be kept intact until time of installation.
7. When handling I-joists with a crane on the job site, take a few simple precautions to prevent damage to the I-joists and injury to your work crew.
 - Pick I-joists in bundles as shipped by the supplier.
 - Orient the bundles so that the webs of the I-joists are vertical.
 - Pick the bundles at the 5" points, using a spreader bar if necessary.
8. Do not handle I-joists in a horizontal orientation.
9. NEVER USE OR TRY TO REPAIR A DAMAGED I-JOIST.



MAXIMUM FLOOR SPANS

1. Maximum clear spans applicable to simple-span or multiple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration and a live load deflection limit of L/480. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
2. Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less, or 3/4 inch for joist spacing of 24 inches. Adhesive shall meet the requirements given in CGS-71.26 Standard. No concrete topping or bridging element was assumed. Increased spans may be achieved with the use of gypsum and/or a row of blocking at mid-span.
3. Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
5. This span chart is based on uniform loads. For applications with other than uniform loads, an engineering analysis may be required based on the use of the design properties.
6. Tables are based on Limit States Design per CAN/CSA O86-07 Standard, and NBC 2010.
7. SI units conversion: 1 inch = 25.4 mm
1 foot = 0.305 m

MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS

Joist Depth	Joist Series	Simple spans				Multiple spans			
		On centre spacing	On centre spacing	On centre spacing	On centre spacing	On centre spacing	On centre spacing	On centre spacing	On centre spacing
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
NL-20		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-40x		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-60		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-80		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-90		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-100		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-120		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-140		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-160		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-180		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-200		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-220		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-240		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-260		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-280		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-300		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-320		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-340		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-360		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-380		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-400		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-420		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-440		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-460		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-480		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"
NL-500		22'-0"	18'-0"	15'-0"	12'-0"	22'-0"	18'-0"	15'-0"	12'-0"

CGIC EVALUATION REPORT 13032-R

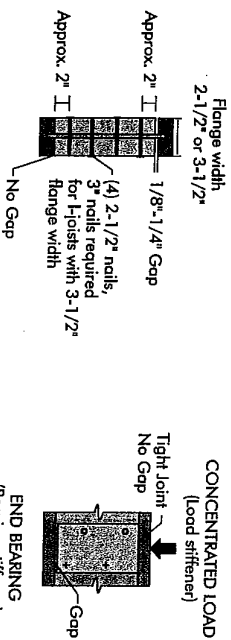
WEB STIFFENERS

RECOMMENDATIONS:

- A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found in the Construction Guide (C101). The gap between the stiffener and the flange is at the top.
- A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
- A load stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

SI units conversion: 1 inch = 25.4 mm

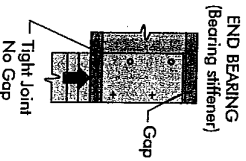
FIGURE 2
WEB STIFFENER INSTALLATION DETAILS










See table below for web stiffener size requirements

STIFFENER SIZE REQUIREMENTS

Flange Width	Web Stiffener Size Each Side of Web
2-1/2"	1" x 2-5/16" minimum width
3-1/2"	1-1/2" x 2-5/16" minimum width



NORDIC I-JOIST SERIES

33 pieces per unit	33 pieces per unit	33 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit
S-PF No.2	1950I MSR	2100I MSR	1950I MSR	2100I MSR	NI-40	NI-50	NI-60	NI-70
NI-20	NI-40x	NI-60	NI-70	NI-80	NI-90	NI-90x		
								
NI-20	NI-40x	NI-60	NI-70	NI-80	NI-90	NI-90x		
1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"		
OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
9-1/2"	9-1/2"	9-1/2"	9-1/2"	9-1/2"	9-1/2"	9-1/2"		
OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"		
1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"		
OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
9-1/2"	9-1/2"	9-1/2"	9-1/2"	9-1/2"	9-1/2"	9-1/2"		
OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"		
1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"		
OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
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1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"		
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OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
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OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
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OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
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OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
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1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"		
OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"	OSB 3/4"		
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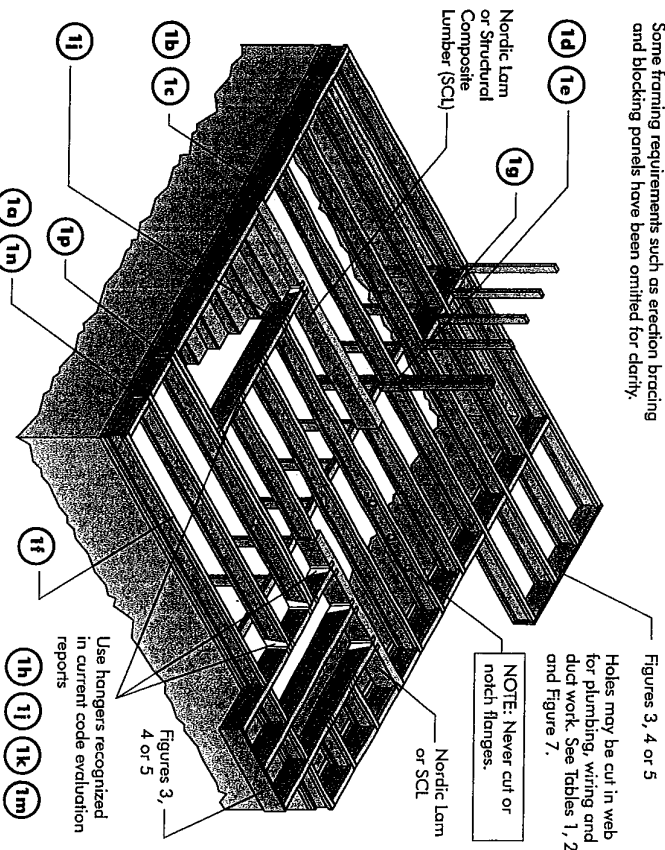
INSTALLING NORDIC I-JOISTS

1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, contact your supplier.
2. Except for cutting to length, I-joist flanges should **never** be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple span I-joists must be level.
5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
6. When using hangers, seat I-joists firmly in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joist end and a header.
8. Concentrated loads greater than those that can normally be expected in residential construction should **only** be applied to the top surface of the top flange. Normal concentrated loads include track lighting fixtures, audio equipment and security cameras. Never suspend unusual or heavy loads from the I-joist's bottom flange. Whenever possible, suspend all concentrated loads from the top of the I-joist. Or, attach the load to blocking that has been securely fastened to the I-joist webs.
9. Never install I-joists where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joists or I-joist blocking panels.
11. For I-joists installed over and beneath bearing walls, use full depth blocking panels, rim board, or squash blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
12. Due to shrinkage, common framing lumber set on edge **may never** be used as blocking or rim boards. I-joist blocking panels or other engineered wood products – such as rim board – must be cut to fit between the I-joists, and on I-joist-compatible depth selected.
13. Provide permanent lateral support of the bottom flange of all I-joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered I-joists at the end support next to the cantilever extension. In the completed structure, the gypsum wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or struts must be used.
14. If square-edge panels are used, edges must be supported between I-joists with 2x4 blocking. Glue panels to blocking to minimize squeaks. Blocking is not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment layer is installed.
15. Nail spacing. Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

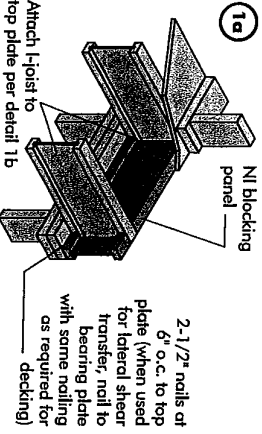


FIGURE 1
TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

Some framing requirements such as erection bracing and blocking panels have been omitted for clarity.

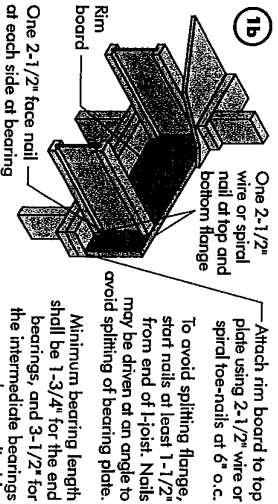


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.



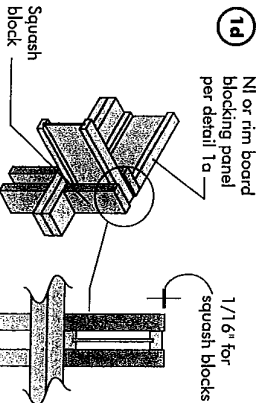
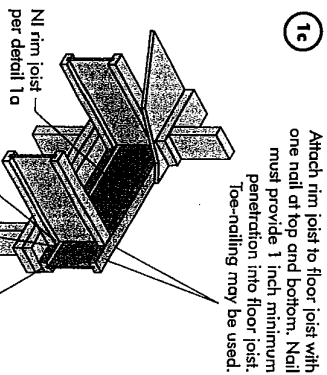
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
N1 Joists	3,300

*The uniform vertical load is limited to a joist depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.



Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

*The uniform vertical load is limited to a rim board depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.



Pair of Squash Blocks	Maximum Factored Vertical per Pair of Squash Blocks (lbs)
2x Lumber	5,500
1-1/8" Rim Board Plus	4,300
	8,500
	6,600

Provide lateral bracing per detail 1a, 1b, or 1c



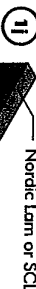
rim board may be used in lieu of I-joists. Backer is not required when rim board is used. Bracing per code shall be carried to the foundation.



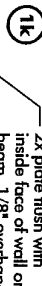
**Provide backer for
siding attachment
unless nailable
sheathing is used**



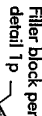
Load bearing wall above shall align vertically with the bearing below. Other conditions, such as offset bearing walls, are not covered by this detail.



Top- or face-mount hanger — installed per manufacturer's recommendations



Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.



headers may also be used. Verify double I-joist capacity to support concentrated loads.



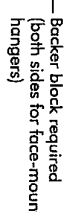
1n Do not bevel-cut joist beyond inside face of wall

Note: Blocking required at bearing for lateral support, not shown for clarity.


* Minimum gauge for bracker block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-Q347 Standard.

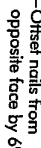
** For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 2" thick flanges use net depth minus 4-1/4".

BACKER BLOCKS (Blocks must be long enough to permit required nailing without splitting)



Note: Unless hanger side is laterally supported the top flange is bearing stiffness shall be used.

Backer block (use if hanger load exceeds 360 lbs)
Before installing a backer block to a double I-Joist, drive three additional 3" nails through the webs and filler block where the backer block will fit. Clinch, install backer tight to top flange. Use twelve 3" nails, clinched when possible. Maximum factored resistance for hanger for this detail = 1,620 lbs. 

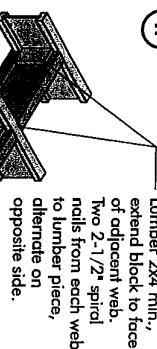


—1/8" to 1/4" gap between top flange and filler block

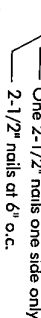
- Notes:**
 1. Support back of H-joist web during nailing to prevent damage to web/flange connection.
 2. Leave a 1/8 to 1/4-inch gap between top of flange block and bottom of top H-joist flange.
 3. Filler block is required between joists for full length of span.
 4. Nail joists together with two rows of 3" nails at 12 inches o.c. (clinchd when possible) on each side of the double H-joist. Total of four nails per foot required. If nails can be clinched, only two nails per foot are required.
 5. The maximum factored load that may be applied to one side of the double joist using this detail is 860 lb/ft². Verify double H-joist capacity.

FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

Flange Size	Joint Depth	Filler Block Size
2-1/2" x 1-1/2"	9-1/2" 11-7/8" 14" 16"	2-1/8" x 6" 2-1/8" x 8" 2-1/8" x 10" 2-1/8" x 12"
3-1/2" x 1-1/2"	9-1/2" 11-7/8" 14" 16"	3" x 6" 3" x 8" 3" x 10" 3" x 12"
3-1/2" x 2"	11-7/8" 14" 16"	3" x 7" 3" x 9" 3" x 11"



Optional: Minimum 1x4 inch strap applied to underside of joist at blocking line or 1/2 inch minimum gypsum ceiling attached to underside of joists.



- **Notes:**
- In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local code requirements for spacing of the blocking.
- All nails are common spiral in this detail.

- All nails are common spiral in this detail.

(3a) I-JOIST CANTILEVER DETAIL FOR BALCONIES (No Wall Load)

Cantilever extension supporting uniform floor loads only.

Rim board or wood structural panel sheathing, attached per detail 1b.

CAUTION: Cantilevers formed this way must be carefully detailed to prevent moisture intrusion into the structure and potential decay of unretreated I-joist extensions.

Attach I-joists to plate at all supports per detail 1b.

I-joist, or rim board

3-1/2" min. bearing required

Note: This detail is applicable to cantilevers supporting a maximum specified uniform live load of 60 psf.

1/2" min. bearing required

1/2" min. bearing required

3b LUMBER CANTILEVER DETAIL FOR BALCONIES (No Well Load)

Full depth header block with 1/8" gap between block and top flange of I-joist. See detail 11a. Nail with 2 rows of 5 nails at 6" o.c. and clinch.

2x8 min. Nail to header block and joist with 2 rows of 3 nails at 6" o.c. and clinch. (Cantilever nails may be used to attach header block if length of nail is sufficient to allow clinching)

Cantilever extension supporting uniform floor loads only

Lumber or wood structural panel closure

3-1/2" min. bearing required

I-joist or rim board

Attach I-joists to plate at all supports per detail 11b

4" max. beam width or cantilever

1-1/2" x 1/2" minimum

Note: This detail is applicable to cantilevers supporting a maximum specified uniform live load of 60 psf.

Method 1 — SHEATHING REINFORCEMENT ONE SIDE

rim board or wood structural panel closure (3/4" minimum thickness); attach per detail 1b

NI blocking panel or rim board blocking; attach per detail 1g

Method 2 — SHEATHING REINFORCEMENT TWO SIDES

- Use same installation as Method 1 but reinforce both sides of I-joist with sheathing.
- Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

Note: Canadian two-plywood sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b. Verify reinforced I-joist capacity.

4b Alternate Method 2 — DOUBLE I-JOIST

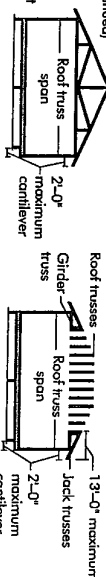
Diagram illustrating the components of a window blind assembly:

- 1: Min board, or wood structural member
- 2: Closure
- 3: (3/32) minimum thickness; attach per detail 1b
- 4: Face nail two rows of 3" nails at 12" o.c. each side through one l-joist web and the filler block to other l-joist web. Offset nails to other side of filler block.
- 5: Blocking panel or rim board
- 6: Blocking, attach per detail 1g

min. bearing
required

For I-beam flange widths greater than 3 inches place an additional row of 3" nails along the centerline of the reinforcing panel from each side. Clinch when possible.

FIGURE 4 (continued)



For hip roofs with the jack trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

CANTILEVER REINFORCEMENT METHODS ALLOWED

[illegible]

1. $N =$ No reinforcement required.

2 = N1 reinforced with $3/4"$ wood structural panel on one side only.

panel on both sides, or double I-joist.

2. Maximum design load shall be: 15 psf roof

dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3'-0" maximum width window or door openings.

For larger openings, or multiple 3'-0" wide openings spaced less than 6'-0" o.c., additional joists beneath the opening's cripple studs may be required.

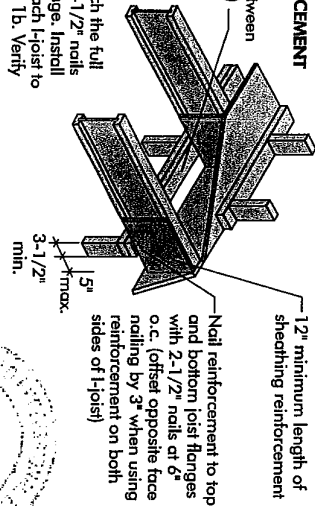
5. Cantilevered joists supporting girder trusses meet the floor span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of $L/480$. Use 12 o.c. requirements for lesser spacing.

or roof beams may require additional reinforcing.

BRICK CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

5a SHEATHING REINFORCEMENT

Provide full depth blocking between joists over support (not shown)

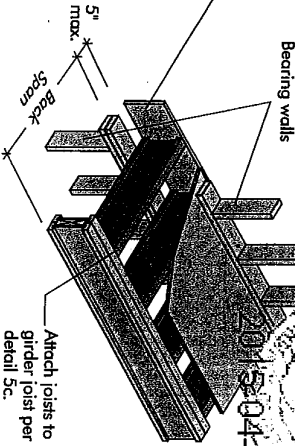


Note: Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4" required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b. Verify reinforced I-joist capacity.

5b SET-BACK DETAIL

Rim board or wood structural panel closure (3/4" minimum thickness), attach per detail 1b.

Notes:
- Provide full depth blocking between joists over support (not shown for clarity)
- Attach I-joist to plate at all supports per detail 1b.
- 3-1/2" minimum I-joist bearing required.



5c SET-BACK CONNECTION

Vertical solid sawn blocks (2x6 S-P-F No. 2 or better) nailed through joist web and web of girder using 2-1/2" nails.

Notes:
- Verify girder joist capacity if the back span exceeds the joist spacing.
- Attach double I-joist per detail 1p, if required.

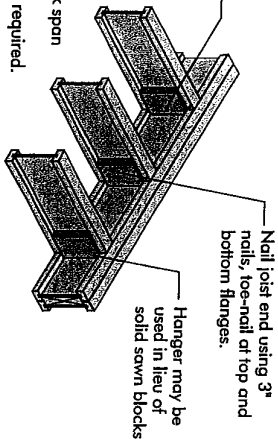
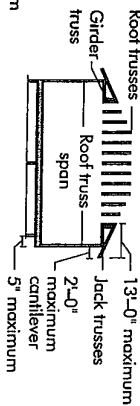
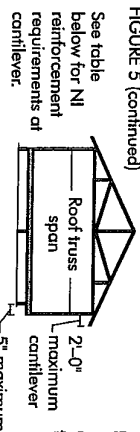


FIGURE 5 (continued)



For hip roofs with the jack trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

JOIST DEPTH (in.)	ROOF TRUSS				ROOF LOADING (UNFACTORED)							
	SPAN (ft)	LL = 30 psf, DL = 15 psf JOIST SPACING (in.)			LL = 40 psf, DL = 15 psf JOIST SPACING (in.)				LL = 50 psf, DL = 15 psf JOIST SPACING (in.)			
12	12	16	19.2	24	12	16	19.2	24	12	16	19.2	24
	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
16	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
20	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
24	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
28	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
32	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
36	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
40	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
44	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
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	28	48	72	112	28	48	72	112	28	48	72	112
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	36	64	96	144	36	64	96	144	36	64	96	144
48	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
52	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
56	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
60	16	24	32	48	16	24	32	48	16	24	32	48
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	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
64	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
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88	16	24	32	48	16	24	32	48	16	24	32	48
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	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
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	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
112	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
128	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
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	28	48	72	112	28	48	72	112	28	48	72	112
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	20	32	48	72	20	32	48	72	20	32	48	72
	24	40	60	96	24	40	60	96	24	40	60	96
	28	48	72	112	28	48	72	112	28	48	72	112
	32	56	84	128	32	56	84	128	32	56	84	128
	36	64	96	144	36	64	96	144	36	64	96	144
176	16	24	32	48	16	24	32	48	16	24	32	48
	20	32	48	72	20	32	48	72	20	32	48	72

INSTALLING THE GLUED FLOOR SYSTEM

1. Wipe any mud, dirt, water, or ice from I-joist flanges before gluing.
2. Snap a chalk line across the I-joists four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
3. Spread only enough glue to lay one or two panels at a time, or follow specific recommendations from the glue manufacturer.
4. Lay the first panel with tongue side to the wall, and nail in place. This protects the tongue of the next panel from damage when tongued into place with a block and sledgehammer.
5. Apply a continuous line of glue (about 1/4-inch diameter) to the top flange of a single I-joist. Apply glue in a winding pattern on wide areas, such as with double I-joists.
6. Apply two lines of glue on I-joists where panel ends butt to assure proper gluing of each end.
7. After the first row of panels is in place, spread glue in the groove of one or two panels at a time before laying the next row. Glue line may be continuous or spaced, but avoid squeeze-out by applying a thinner line (1/8 inch) than used on I-joist flanges.
8. Top the second row of panels into place, using a block to protect groove edges.
9. Stagger end joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch at all edges, including T&G edges, is recommended. (Use a spacer tool or an 2-1/2" common nail to assure accurate and consistent spacing.)
10. **Complete all nailing of each panel before glue sets.** Check the manufacturer's recommendations for cure time. (Warm weather accelerates glue setting.) Use 2" ring- or screw-shank nails for panels 3/4-inch thick or less, and 2-1/2" ring- or screw-shank nails for thicker panels. Space nails per the table below. Closer nail spacing may be required by some codes, or for diaphragm construction. The finished deck can be walked on right away and will carry construction loads without damage to the glue bond.

FASTENERS FOR SHEATHING AND SUBFLOORING(1)

Maximum Joist Spacing (in.)		Minimum Panel Thickness (in.)	Nail Size and Type		Maximum Spacing of Fasteners	
			Common Wire or Spiral Nails	Staples	Edges	Intern. Supports
16	5/8	2"	1-3/4"	2"	6"	12"
20	5/8	2"	1-3/4"	2"	6"	12"
24	3/4	2"	1-3/4"	2"	6"	12"

1. Fasteners of sheathing and subflooring shall conform to the above table.
2. Staples shall not be less than 1/16-inch in diameter or thickness, with not less than a 3/8-inch crown driven with the crown parallel to framing.
3. Flooring screws shall not be less than 1/8-inch in diameter.
4. Special conditions may impose heavy traffic and concentrated loads that require construction in excess of the minimums shown.
5. Use only adhesives conforming to CAN/CGSB-71.26 Standard, Adhesives for Field-Gluing Plywood to Lumber Framing for Floor System, applied in accordance with the manufacturer's recommendations. If OSB panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with panel manufacturer.

Ref.: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

IMPORTANT NOTE:

Floor sheathing must be field glued to the I-joist flanges in order to achieve the maximum spans shown in this document. If sheathing is nailed only, I-joist spans must be verified with your local distributor.

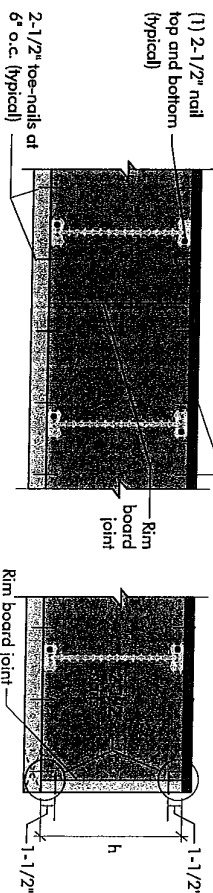
RIM BOARD INSTALLATION DETAILS

(8a) ATTACHMENT DETAILS WHERE RIM BOARDS ABOUT

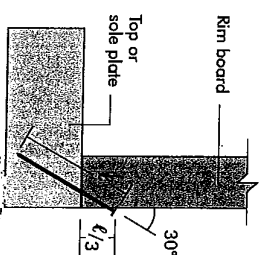
Rim board joint Between Floor Joists

2-1/2" nails at 6" o.c. (typical)

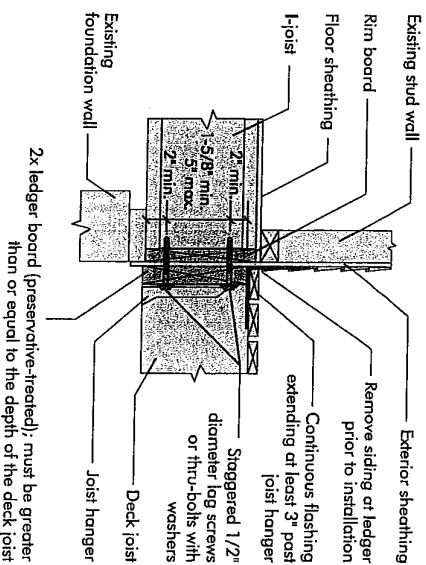
Rim board Joint at Corner



(8b) TOE-NAIL CONNECTION AT RIM BOARD



(8c) 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL

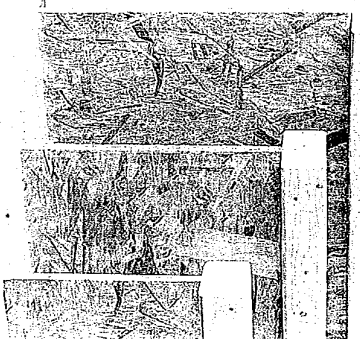


2015-04-16

PRODUCT WARRANTY

Chambers Chikmagnum guarantees that, in accordance with our specifications, North products are free from manufacturing defects in material and workmanship.

Furthermore, Chambers Chikmagnum warrants that our products, when utilized in accordance with our handling and installation instructions, will meet or exceed our specifications for the lifetime of the structure.



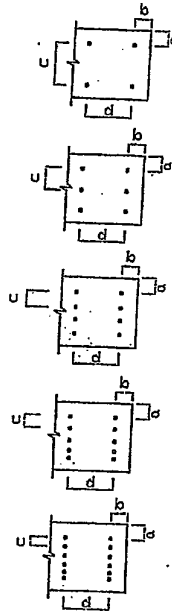
MICRO CITY

ENGINEERING SERVICES INC.

TEL: (519) 287 - 2242

R.R. #1, P.O. BOX 61, GLENCOE, ONTARIO, N0L 1M0

LVL HEADER AND CONVENTIONAL LUMBER NAILING DETAILS		
DETAIL NUMBER	NUMBER OF ROWS	SPACING (INCHES o/c) "d"
A	2	12
B	2	8
C	2	6
D	2	4
1A	3	12
1B	3	8
1C	3	6
1D	3	4
2A	4	12
2B	4	8
2C	4	6
2D	4	4
3A	5	12
3B	5	8
3C	5	6
3D	5	4
4A	6	12
4B	6	8
4C	6	6
4D	6	4



NOTES:

- (1) MINIMUM LUMBER EDGE DISTANCE "a" = 1"
- (2) MINIMUM LUMBER END DISTANCE "b" = 2"
- (3) MINIMUM NAIL ROW SPACING "c" = 2"
- (4) STAGGER NAILS "d/2" BETWEEN PLYS FOR MULTI-PLY MEMBERS (3 PLY OR MORE)
- (5) ALL NAILS ARE 3-1/2" ARDOX SPIRAL NAILS
- (6) DO **NOT** USE AIR-DRIVEN NAILS



DWG NO TAMN1001.14

STRUCTURAL

COMPONENT ONLY

TO BE USED ONLY
WITH BEAM CLOS
BEARING THE
STAMP BELOW

PROVIDE NAILING

DETAIL # X SEE

DWG #TAMN1001-14