



FROM PLAN DATED: NOV 2015

BUILDER:
BAYVIEW WELLINGTON

SITE:
ALCONA SHORES

MODEL: S39-2 CORNER

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

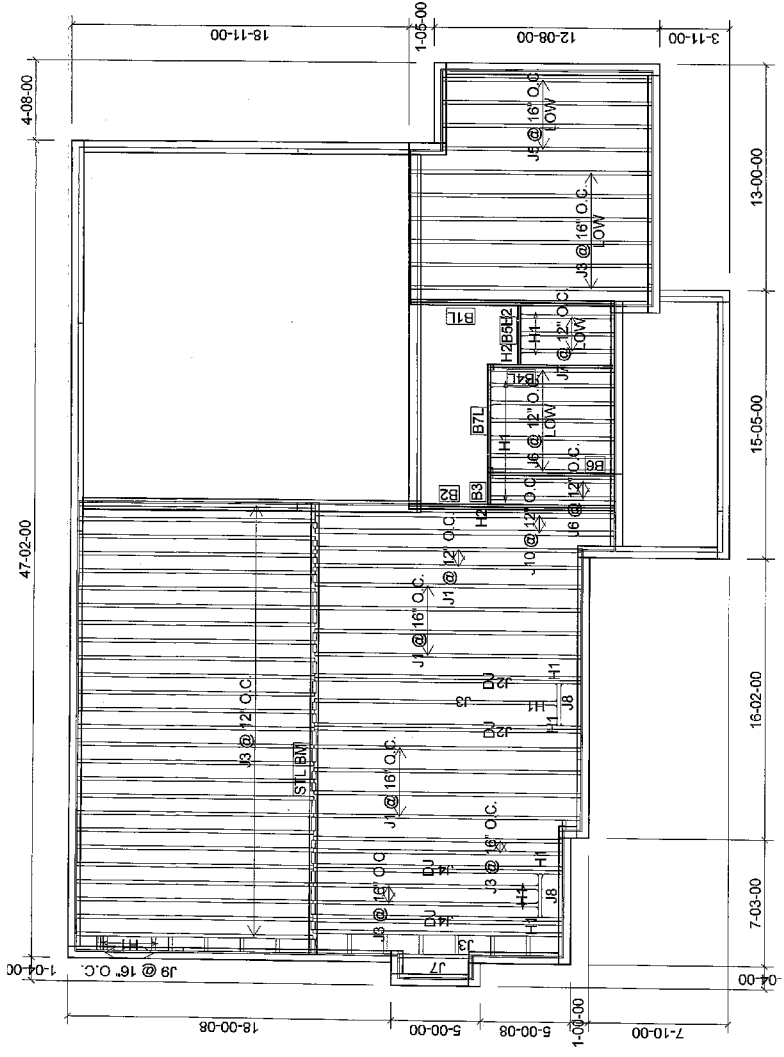
DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

1st FLOOR



Connector Summary		
Qty	Manuf	Product
10	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
5	H1	IUS2.56/9.5
1	H2	HUS1.81/9.5
2	H2	HUS1.81/9.5

Products			Plies		Net Qty
PlotID	Length	Product			
J1	16'-00-00	9 1/2" NI-40x	1		10
J2	16'-00-00	9 1/2" NI-40x	2		4
J3	14'-00-00	9 1/2" NI-40x	1		38
J4	14'-00-00	9 1/2" NI-40x	2		4
J5	12'-00-00	9 1/2" NI-40x	1		4
J6	8'-00-00	9 1/2" NI-40x	1		9
J7	6'-00-00	9 1/2" NI-40x	1		4
J8	4'-00-00	9 1/2" NI-40x	1		2
J9	2'-00-00	9 1/2" NI-40x	1		2
J10	18'-00-00	9 1/2" NI-80	1		2
B1L	12'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2		2
B2	12'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2		2
B4L	8'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1		1
B6	8'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1		1
B7L	8'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1		1
B5L	4'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1		1
B3	2'-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1		1

Town of Innisfill Certified Model
09/03/2018 9:22:49 AM Agaveas



FROM PLAN DATED: NOV 2015

BUILDER:
BAYVIEW WELLINGTON

SITE:
ALCONA SHORES

MODEL: S39-2 CORNER

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
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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/ft²

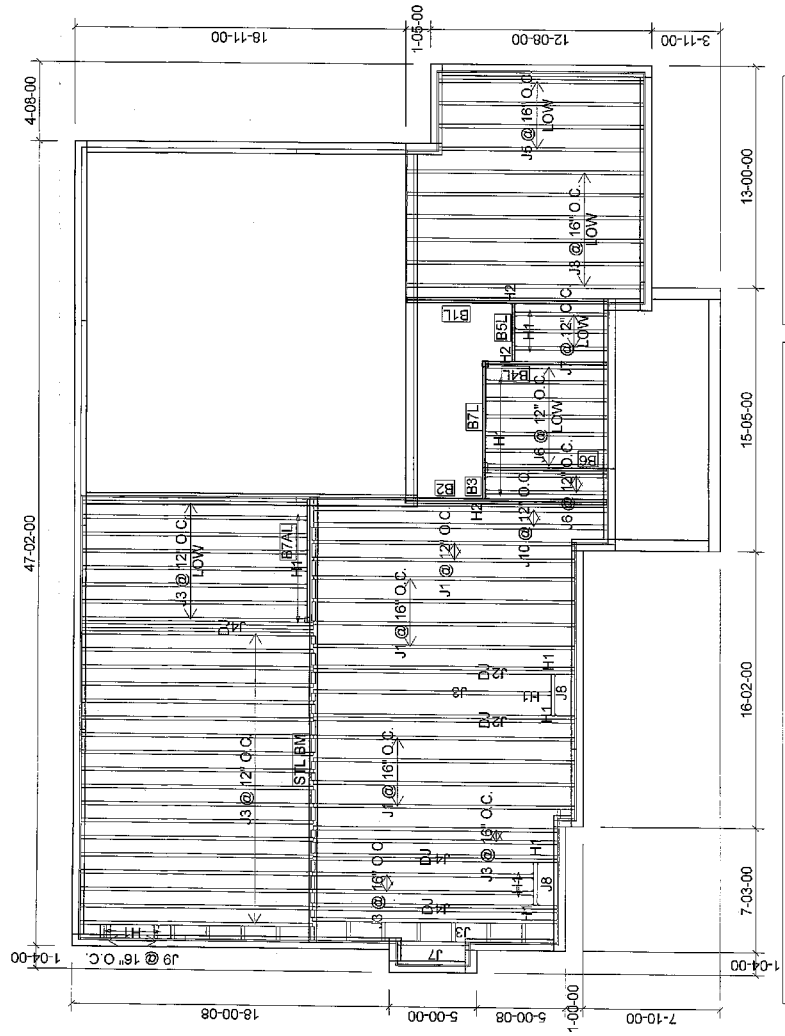
TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

1st FLOOR

SUNKEN



Connector Summary		
Qty	Manuf	Product
17	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
5	H1	IUS2.56/9.5
1	H2	HUS1.81/9.5
2	H2	HUS1.81/9.5

Products			Piles		Net Qty	
PlotID	Length	Product				
J1	16-00-00	9 1/2" NI-40x		1	10	
J2	16-00-00	9 1/2" NI-40x		2	4	
J3	14-00-00	9 1/2" NI-40x		1	38	
J4	14-00-00	9 1/2" NI-40x		2	6	
J5	12-00-00	9 1/2" NI-40x		1	4	
J6	8-00-00	9 1/2" NI-40x		1	9	
J7	6-00-00	9 1/2" NI-40x		1	4	
J8	4-00-00	9 1/2" NI-40x		1	2	
J9	2-00-00	9 1/2" NI-40x		1	2	
J10	18-00-00	9 1/2" NI-80		1	2	
B1L	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		2	2	
B2	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		2	2	
B4L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		1	1	
B6	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		1	1	
B7AL	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		1	1	
B7L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		1	1	
B5L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		1	1	
B3	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP		1	1	

Town of Innisfill Certified Model
09/03/2018 9:22:50 AM Agaveas



FROM PLAN DATED: NOV 2015

BUILDER:
BAYVIEW WELLINGTON

SITE:
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MODEL: S39-2 CORNER

ELEVATION: A&B

LOT:

CITY: INNISFILL

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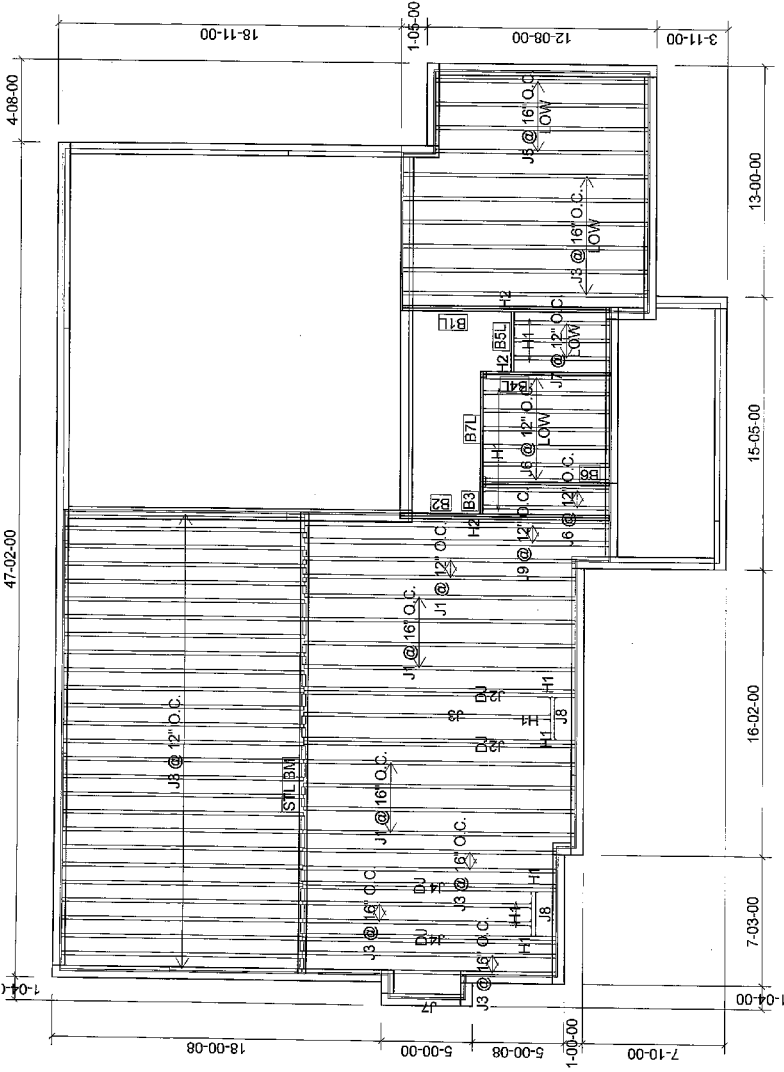
TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

1st FLOOR

WITH DECK



Connector Summary		
Qty	Manuf	Product
10	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
3	H1	IUS2.56/9.5
1	H2	HUS1.81/9.5
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Products		
PlotID	Length	Product
J1	16-00-00	9 1/2" NI-40x
J2	16-00-00	9 1/2" NI-40x
J3	14-00-00	9 1/2" NI-40x
J4	14-00-00	9 1/2" NI-40x
J5	12-00-00	9 1/2" NI-40x
J6	8-00-00	9 1/2" NI-40x
J7	6-00-00	9 1/2" NI-40x
J8	4-00-00	9 1/2" NI-40x
J9	18-00-00	9 1/2" NI-80
B1L	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP
B2	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP
B4L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP
B6	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP
B7L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP
B5L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP
B3	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP

Town of Innisfill Certified Model
09/01/2018 9:22:52 AM Agave



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ELEVATION: A&B

LOT:

CITY: INNISFILL

SALESMAN: M D

DESIGNER: AJ

REVISION:

NOTES:
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STORAGE AND INSTALLATION.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

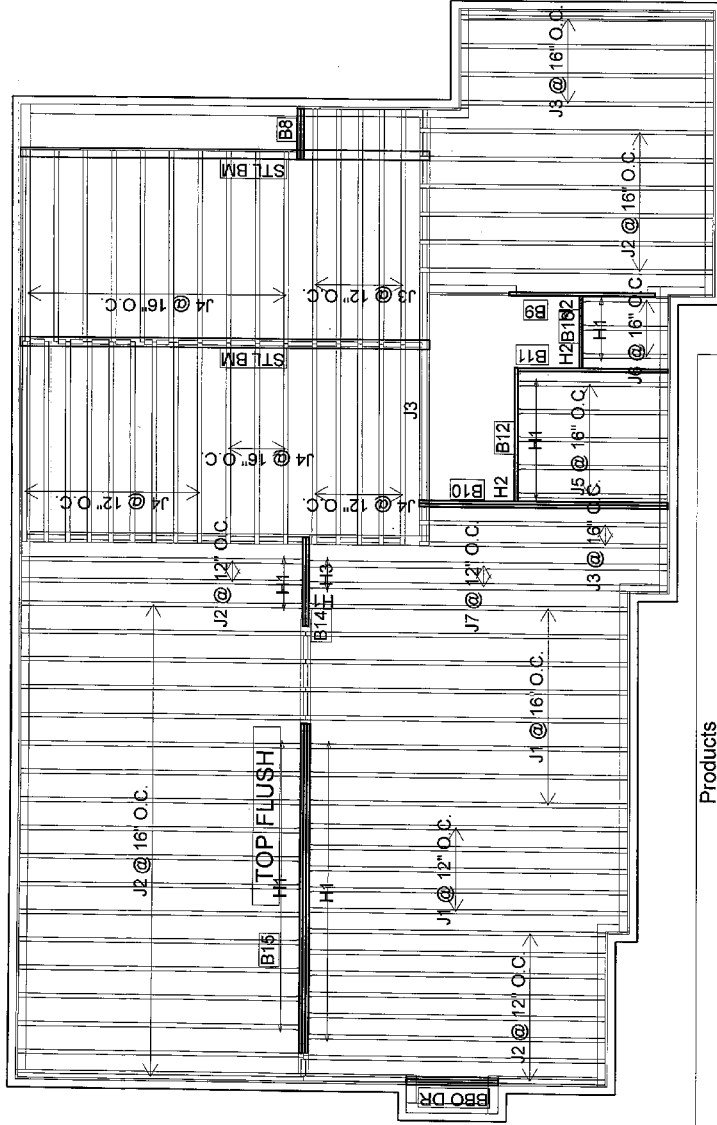
DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 9/1/2017

2nd FLOOR



Products				Connector Summary		
PlotID	Length	Product	Piles	Qty	Manuf	Product
J1	16-00-00	9 1/2" NI-40x	1	8	H1	IUS2.56/9.5
J2	14-00-00	9 1/2" NI-40x	1	4	H1	IUS2.56/9.5
J3	12-00-00	9 1/2" NI-40x	1	25	H1	IUS2.56/9.5
J4	10-00-00	9 1/2" NI-40x	1	2	H2	HUS1.81/9.5
J5	8-00-00	9 1/2" NI-40x	1	1	H2	HUS1.81/9.5
J6	4-00-00	9 1/2" NI-40x	1	2	H3	IUS3.56/9.5
J7	18-00-00	9 1/2" NI-80	1	2		
B10	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2			
B11	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1			
B12	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1			
B9	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1			
B14	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2			
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1			
B8	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2			
B15	16-00-00	1-3/4" x 14" VERSA-LAM@ 2.0 3100 SP	3			

Town of Innisfill Certified Model
09/01/2018 9:22:54 AM Agendas



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1L(i1247

Specifier:

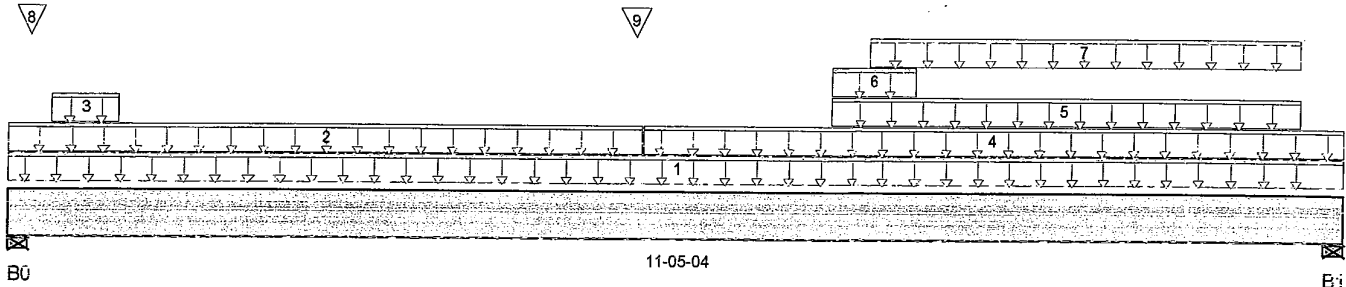
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:22:56 AM kgervais



Total Horizontal Product Length = 11-05-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 2-3/8"	946 / 0	697 / 0		
B1, 4-3/8"	746 / 0	760 / 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	00-00-00	11-05-04	17	6			n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-05-02	15	6			n/a
3	5(i423)	Unf. Lin. (lb/ft)	L	00-04-06	00-11-06	603	437			n/a
4	FC1 Floor Material	Unf. Lin. (lb/ft)	L	05-05-02	11-05-04	6				n/a
5	6(i424)	Unf. Lin. (lb/ft)	L	07-00-06	11-00-14		101			n/a
6	6(i424)	Unf. Lin. (lb/ft)	L	07-00-06	07-09-06	488	271			n/a
7	6(i424)	Unf. Lin. (lb/ft)	L	07-04-06	11-00-14	23	14			n/a
8	E11(i415)	Conc. Pt. (lbs)	L	00-02-03	00-02-03		37			n/a
9	B5L(i1248)	Conc. Pt. (lbs)	L	05-04-04	05-04-04	574	275			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	6,634 ft-lbs	25,408 ft-lbs	26.1%	1	05-04-04
End Shear	2,166 lbs	11,571 lbs	18.7%	1	00-11-14
Total Load Defl.	L/681 (0.194")	0.55"	35.2%	4	05-09-15
Live Load Defl.	L/999 (0.112")	n/a	n/a	5	05-07-09
Max Defl.	0.194"	n/a	n/a	4	05-09-15
Span / Depth	13.9	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	2-3/8" x 3-1/2"	2,291 lbs	64.5%	22.6%	Unspecified
B1 Wall/Plate	4-3/8" x 3-1/2"	2,070 lbs	31.6%	11.1%	Unspecified

Notes





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement...B1L(i1247)

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

September 17, 2016 09:47:31

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1L(i12

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.

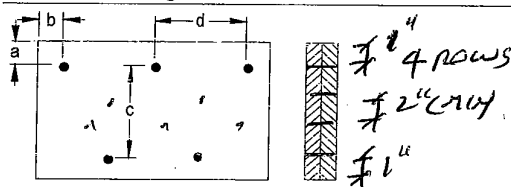
CONFORMS TO UBC 2012

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.

BC CALO®, 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.

Connection Diagram



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

Calculated Side Load = 108.9 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





Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B2(i1250)

BC CALC® Design Report



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

September 17, 2016 09:47:31

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports:

CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B2(i1250)

Specifier:

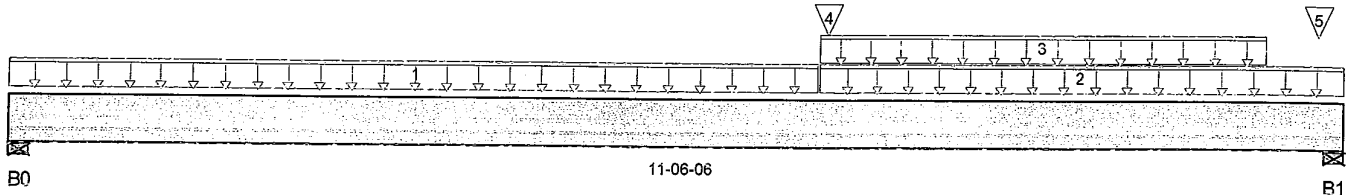
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

09/03/2018 9:22:58 AM kgervais



Total Horizontal Product Length = 11-06-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 2-3/8"	325 / 0	201 / 0		
B1, 5-1/2"	1,105 / 0	631 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	06-11-10	20	7			n/a
2 FC2 Floor Material	Unf. Lin. (lb/ft)	L	06-11-10	11-06-06	12	5			n/a
3 User Load	Unf. Lin. (lb/ft)	L	06-11-10	10-10-06	240	120			n/a
4 B3(i781)	Conc. Pt. (lbs)	L	07-00-08	07-00-08	81	34			n/a
5 2(i420)	Conc. Pt. (lbs)	L	11-03-10	11-03-10	220	147			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,858 ft-lbs	25,408 ft-lbs	15.2%	1	07-04-03
End Shear	1,888 lbs	11,571 lbs	16.3%	1	10-03-06
Total Load Defl.	L/999 (0.107")	n/a	n/a	4	06-00-06
Live Load Defl.	L/999 (0.068")	n/a	n/a	5	06-00-06
Max Defl.	0.107"	n/a	n/a	4	06-00-06
Span / Depth	13.9	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	2-3/8" x 3-1/2"	739 lbs	20.8%	7.3%	Unspecified
B1 Wall/Plate	5-1/2" x 3-1/2"	2,447 lbs	29.7%	10.4%	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.

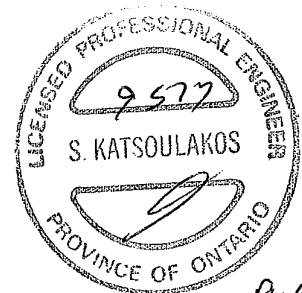
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BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

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

p04



Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement Flush Beams\B2(i1250)

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

September 17, 2016 09:47:31

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

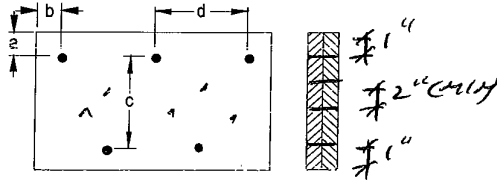
Description: Designs\Flush Beams\Basement\Flush Beams\B2(i1250)

Specifier:

Designer: AJ

Company:

Misc:

Connection Diagram

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

Calculated Side Load = 14.7 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: 16d Nail 3-1/2 in.

3 1/2" ARDOX SPIRAL**Disclosure**

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puz

DWG NO. TAM 4464B 17
 STRUCTURAL
 COMPONENT ONLY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B3(i781)

BC CALC® Design Report



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

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Specifier:

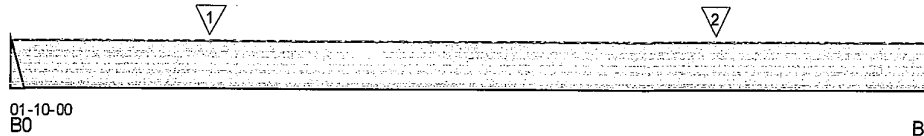
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

09/03/2018 9:23:00 AM kgervais



Total Horizontal Product Length = 01-10-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	99 / 0	41 / 0		
B1, 3-1/2"	105 / 0	44 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 J4(i780)	Conc. Pt. (lbs)	L	00-04-12	00-04-12	106	40			n/a
2 J4(i786)	Conc. Pt. (lbs)	L	01-04-12	01-04-12	98	37			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	58 ft-lbs	12,704 ft-lbs	0.5%	1	00-04-12
End Shear	49 lbs	5,785 lbs	0.8%	1	00-09-00
Total Load Defl.	L/999 (0")	n/a	n/a	4	00-09-15
Live Load Defl.	L/999 (0")	n/a	n/a	5	00-09-15
Max Defl.	0"	n/a	n/a	4	00-09-15
Span / Depth	1.9	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"	200 lbs	n/a	4.7%	Hanger
B1 Post	3-1/2" x 1-3/4"	213 lbs	5.4%	2.9%	Unspecified

Notes

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

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

Calculation assumes member is partially braced. See engineering report for the unbraced length.

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 DBC 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 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B4L(i1249)

BC CALC® Design Report



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

September 17, 2016 09:47:31

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B4L(i1249

Specifier:

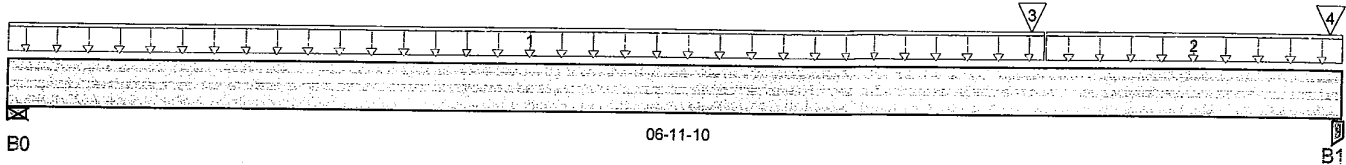
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

09/03/2018 9:23:01 AM kgervais



Total Horizontal Product Length = 06-11-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 2-3/8"	202 / 0	106 / 0		
B1, 1-3/4"	699 / 0	391 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 FC 1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-05-02	22	8			n/a
2 FC 1 Floor Material	Unf. Lin. (lb/ft)	L	05-05-02	06-11-10	6				n/a
3 B5L(i1248)	Conc. Pt. (lbs)	L	05-04-04	05-04-04	560	270			n/a
4 PBO4(i439)	Conc. Pt. (lbs)	L	06-10-12	06-10-12	212	145			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,565 ft-lbs	12,704 ft-lbs	12.3%	1	05-04-04
End Shear	1,021 lbs	5,785 lbs	17.6%	1	06-00-06
Total Load Defl.	L/999 (0.03")	n/a	n/a	4	03-10-04
Live Load Defl.	L/999 (0.02")	n/a	n/a	5	03-10-04
Max Defl.	0.03"	n/a	n/a	4	03-10-04
Span / Depth	8.5	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	2-3/8" x 1-3/4"	436 lbs	24.5%	8.6%	Unspecified
B1 Post	1-3/4" x 1-3/4"	1,537 lbs	77.2%	41.1%	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™, 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 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B5L(i1248)

BC CALC® Design Report



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

September 17, 2016 09:47:31

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B5L(i1248

Specifier:

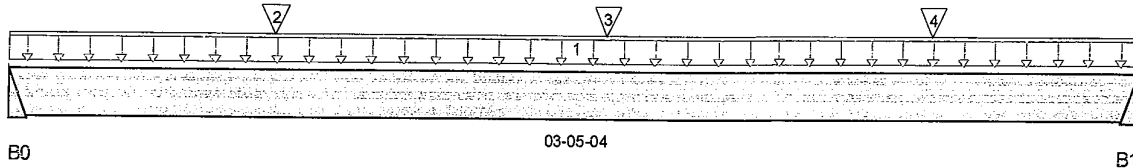
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:02 AM kgervais



Total Horizontal Product Length = 03-05-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	560 / 0	270 / 0		
B1	574 / 0	275 / 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	03-05-04	240	120			n/a
2	J5(i762)	Conc. Pt. (lbs)	L	00-09-12	00-09-12	103	39			n/a
3	J5(i745)	Conc. Pt. (lbs)	L	01-09-12	01-09-12	109	41			n/a
4	J5(i426)	Conc. Pt. (lbs)	L	02-09-12	02-09-12	97	36			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	964 ft-lbs	12,704 ft-lbs	7.6%	1	01-09-12
End Shear	645 lbs	5,785 lbs	11.2%	1	00-11-08
Total Load Defl.	L/999 (0.005")	n/a	n/a	4	01-08-07
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	01-08-07
Max Defl.	0.005"	n/a	n/a	4	01-08-07
Span / Depth	4.1	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"	1,178 lbs	n/a	27.6%	Hanger
B1 Hanger	2" x 1-3/4"	1,205 lbs	n/a	28.2%	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 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 DBC 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.





Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B6(i782)

BC CALC® Design Report



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

September 17, 2016 09:47:31

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B6(i782)

Specifier:

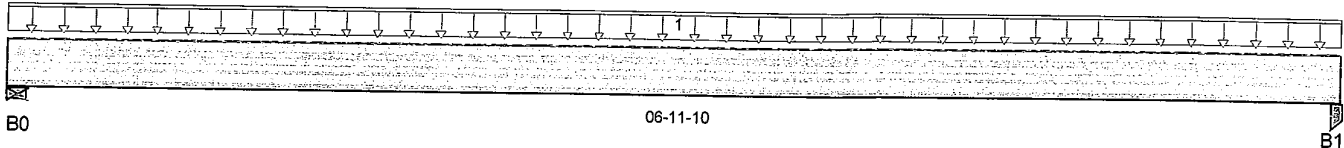
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:03 AM kgervais



Total Horizontal Product Length = 06-11-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 2-3/8"	31 / 0	28 / 0		
B1, 1-3/4"	30 / 0	28 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1 FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	06-11-10	9	3	1.00	1.15	n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	132 ft-lbs	12,704 ft-lbs	1%	1	03-06-02
End Shear	59 lbs	5,785 lbs	1%	1	00-11-14
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	03-06-02
Live Load Defl.	L/999 (0.002")	n/a	n/a	5	03-06-02
Max Defl.	0.003"	n/a	n/a	4	03-06-02
Span / Depth	8.5	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	2-3/8" x 1-3/4"	82 lbs	4.6%	1.6%	Unspecified
B1 Post	1-3/4" x 1-3/4"	80 lbs	4%	2.2%	Unspecified

Notes

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

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

Calculation assumes member is partially braced. See engineering report for the unbraced length.

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 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B7L(i777)

BC CALC® Design Report



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

September 17, 2016 09:47:32

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B7L(i777)

Specifier:

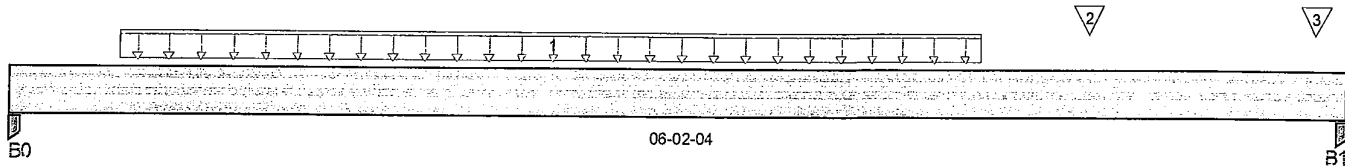
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:04 AM kgervais



Total Horizontal Product Length = 06-02-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	368 / 0	154 / 0		
B1, 3-1/2"	741 / 0	417 / 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	00-06-00	04-06-00	143	54			n/a
2 J4(i743)	Conc. Pt. (lbs)	L	05-00-00	05-00-00	135	51			n/a
3 PBO4(i439)	Conc. Pt. (lbs)	L	06-00-08	06-00-08	402	274			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,189 ft-lbs	12,704 ft-lbs	9.4%	1	03-00-00
End Shear	708 lbs	5,785 lbs	12.2%	1	01-01-00
Total Load Defl.	L/999 (0.019")	n/a	n/a	4	03-00-12
Live Load Defl.	L/999 (0.014")	n/a	n/a	5	03-00-12
Max Defl.	0.019"	n/a	n/a	4	03-00-12
Span / Depth	7.2	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"	744 lbs	18.7%	10%	Unspecified
B1 Post	3-1/2" x 1-3/4"	1,633 lbs	41%	21.9%	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 44653-17
 STRUCTURAL
 COMPONENT ONLY



Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B8(i1239)

BC CALC® Design Report



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

September 17, 2016 09:47:32

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports:

CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B8(i1239)

Specifier:

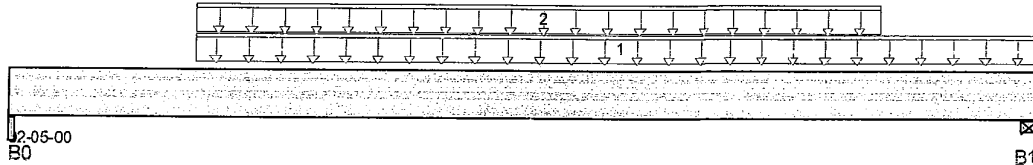
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:05 AM kgervais



Total Horizontal Product Length = 02-05-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/4"	42 / 0	125 / 0	94 / 0	
B1, 4-3/8"	50 / 0	128 / 0	94 / 0	

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	02-05-00	20	10			n/a
2 User Load	Unf. Lin. (lb/ft)	L	00-05-04	02-00-10	33	130	117		n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	146 ft-lbs	25,408 ft-lbs	0.6%	13	01-02-15
End Shear	3 lbs	n/a	n/a	0	01-02-12
Total Load Defl.	L/999 (0")	n/a	n/a	45	01-02-15
Live Load Defl.	L/999 (0")	n/a	n/a	61	01-02-15
Max Defl.	0"	n/a	n/a	45	01-02-15
Span / Depth	2.2	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"	319 lbs	4.1%	1.4%	Unspecified
B1 Wall/Plate	4-3/8" x 3-1/2"	326 lbs	5%	1.7%	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.

Unbalanced snow loads determined from building geometry were used in selected products 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





Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B8(i1239)

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

September 17, 2016 09:47:32

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

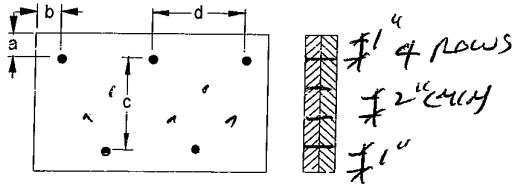
Description: Designs\Flush Beams\1st Floor\Flush Beams\B8(i1239)

Specifier:

Designer: AJ

Company:

Misc:

Connection Diagram

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

Member has no side loads.

Connectors are: 16d Nails

3 1/2" ARDOX SPIRAL

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 1st Floor\Flush Beams\B9(i775)

BC CALC® Design Report



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

September 17, 2016 09:47:32

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B9(i775)

Specifier:

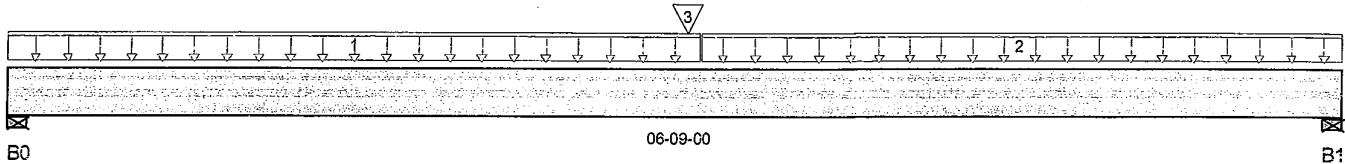
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:07 AM kgervais



Total Horizontal Product Length = 06-09-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	358 / 0	199 / 0		
B1, 4"	359 / 0	200 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-05-14	27	13			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	03-05-14	06-09-00	23	12			n/a
3	B13(i776)	Conc. Pt. (lbs)	L	03-05-00	03-05-00	548	282			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,109 ft-lbs	12,704 ft-lbs	16.6%	1	03-05-00
End Shear	726 lbs	5,785 lbs	12.6%	1	05-07-08
Total Load Defl.	L/999 (0.034")	n/a	n/a	4	03-05-00
Live Load Defl.	L/999 (0.022")	n/a	n/a	5	03-05-00
Max Defl.	0.034"	n/a	n/a	4	03-05-00
Span / Depth	7.8	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" x 1-3/4"	786 lbs	26.3%	9.2%	Unspecified
B1 Wall/Plate	4" x 1-3/4"	789 lbs	26.4%	9.2%	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™, 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.





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B10(i1077)

BC CALC® Design Report



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

September 17, 2016 09:47:32

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B10(i1077)

Specifier:

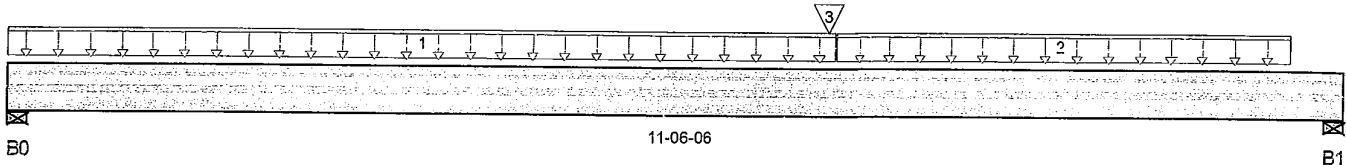
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:08 AM kgervais



Total Horizontal Product Length = 11-06-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	308 / 0	215 / 0		
B1, 5-1/2"	387 / 0	260 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-01-05	27	13			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	07-01-05	11-00-14	21	10			n/a
3	B12(i812)	Conc. Pt. (lbs)	L	07-00-07	07-00-07	423	228			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,228 ft-lbs	25,408 ft-lbs	12.7%	1	07-00-07
End Shear	855 lbs	11,571 lbs	7.4%	1	10-03-06
Total Load Defl.	L/999 (0.084")	n/a	n/a	4	05-11-03
Live Load Defl.	L/999 (0.051")	n/a	n/a	5	05-11-03
Max Defl.	0.084"	n/a	n/a	4	05-11-03
Span / Depth	13.7	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4-3/8" x 3-1/2"	731 lbs	11.2%	3.9%	Unspecified
B1 Wall/Plate	5-1/2" x 3-1/2"	905 lbs	11%	3.9%	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.

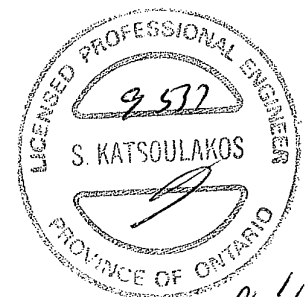
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.

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



P612



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor...\B10(i1077)

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

September 17, 2016 09:47:32

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B10(i1077)

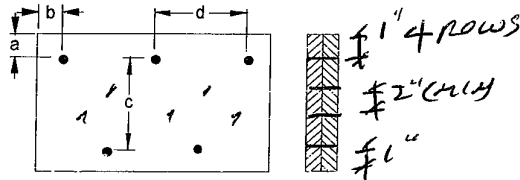
Specifier:

Designer: AJ

Company:

Msc:

Connection Diagram



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

Calculated Side Load = 82.7 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: 3 1/2" ARDOX SPIRAL

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 1st Floor/Flush Beams\B11(i779)

BC CALC® Design Report



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

September 17, 2016 09:47:32

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B11(i779)

Specifier:

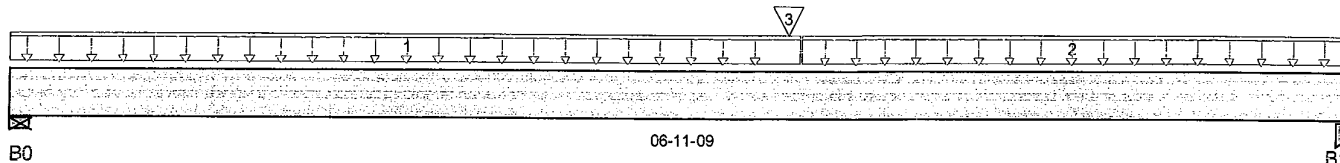
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:12 AM kgervais



Total Horizontal Product Length = 06-11-09

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	315 / 0	179 / 0		
B1, 1-3/4"	359 / 0	201 / 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	04-01-04	27	13			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	04-01-04	06-11-09	15	7			n/a
3	B13(i776)	Conc. Pt. (lbs)	L	04-00-06	04-00-06	523	270			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,089 ft-lbs	12,704 ft-lbs	16.4%	1	04-00-06
End Shear	754 lbs	5,785 lbs	13%	1	06-00-05
Total Load Defl.	L/999 (0.038")	n/a	n/a	4	03-08-01
Live Load Defl.	L/999 (0.025")	n/a	n/a	5	03-08-01
Max Defl.	0.038"	n/a	n/a	4	03-08-01
Span / Depth	8.3	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 Wall/Plate	4-3/8" x 1-3/4"	696 lbs	21.3%	7.5%	Unspecified
B1 Post	1-3/4" x 1-3/4"	789 lbs	39.7%	21.1%	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.

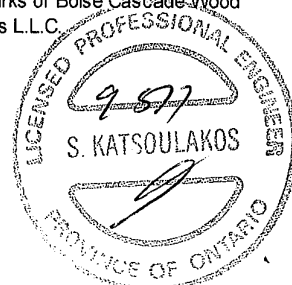
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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

CONFORMS TO DBC 2012

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCM®, 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.





Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B12(i812)

BC CALC® Design Report



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

September 17, 2016 09:47:32

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B12(i812)

Specifier:

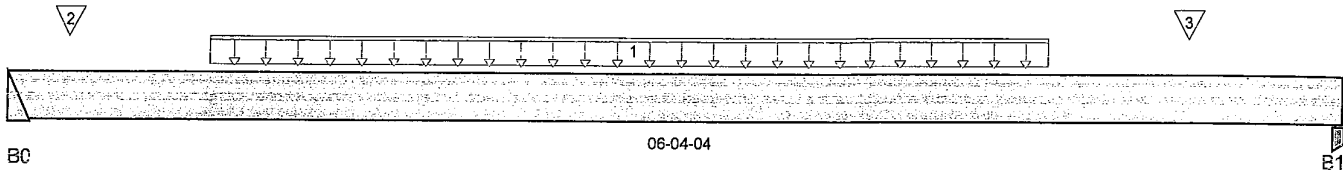
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:13 AM kgervais



Total Horizontal Product Length = 06-04-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	423 / 0	228 / 0		
B1, 3-1/2"	397 / 0	215 / 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	00-11-08	04-11-08	139	70			n/a
2	J5(i1047)	Conc. Pt. (lbs)	L	00-03-08	00-03-08	123	62			n/a
3	J5(i1048)	Conc. Pt. (lbs)	L	05-07-08	05-07-08	142	71			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,373 ft-lbs	12,704 ft-lbs	10.8%	1	02-11-08
End Shear	723 lbs	5,785 lbs	12.5%	1	05-03-04
Total Load Defl.	L/999 (0.025")	n/a	n/a	4	03-01-08
Live Load Defl.	L/999 (0.016")	n/a	n/a	5	03-01-08
Max Defl.	0.025"	n/a	n/a	4	03-01-08
Span / Depth	7.6	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 Hanger	2" x 1-3/4"	919 lbs	n/a	21.5%	Hanger
B1 Post	3-1/2" x 1-3/4"	864 lbs	21.7%	11.6%	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.

CONFORMS TO OBC 2012





Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B13(i776)

BC CALC® Design Report



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

September 17, 2016 09:47:33

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B13(i776)

Specifier:

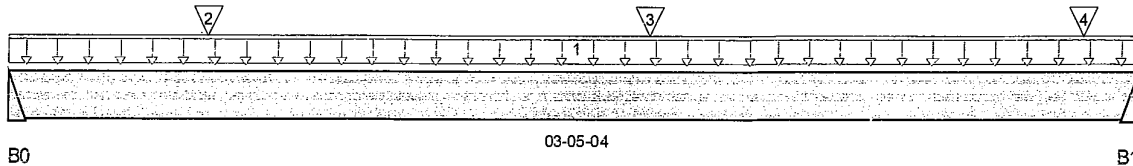
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:14 AM kgervais



Total Horizontal Product Length = 03-05-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	526 / 0	271 / 0		
B1	545 / 0	281 / 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	03-05-04	240	120			n/a
2	J6(i1093)	Conc. Pt. (lbs)	L	00-07-04	00-07-04	79	40			n/a
3	J6(i1155)	Conc. Pt. (lbs)	L	01-11-04	01-11-04	105	52			n/a
4	J6(i1024)	Conc. Pt. (lbs)	L	03-03-04	03-03-04	62	31			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	879 ft-lbs	12,704 ft-lbs	6.9%	1	01-10-02
End Shear	558 lbs	5,785 lbs	9.6%	1	00-11-08
Total Load Defl.	L/999 (0.005")	n/a	n/a	4	01-08-11
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	01-08-11
Max Defl.	0.005"	n/a	n/a	4	01-08-11
Span / Depth	4.1	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"	1,128 lbs	n/a	26.4%	Hanger
B1 Hanger	2" x 1-3/4"	1,169 lbs	n/a	27.4%	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 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.





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor...\B14(i1105)

BC CALC® Design Report



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

September 17, 2016 09:47:33

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmd

Description: Designs\Flush Beams\1st Floor\Flush Beams\B14(i1105)

Specifier:

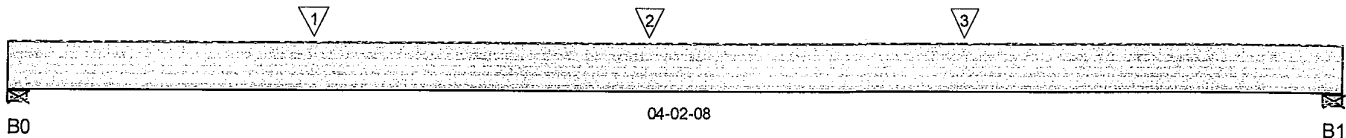
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:15 AM kgervais



Total Horizontal Product Length = 04-02-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	1,017 / 0	528 / 0		
B1, 4"	921 / 0	480 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 -	Conc. Pt. (lbs)	L	00-11-08	00-11-08	664	332			n/a
2 -	Conc. Pt. (lbs)	L	02-00-02	02-00-02	571	284			n/a
3 -	Conc. Pt. (lbs)	L	03-00-03	03-00-03	703	351			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,267 ft-lbs	25,408 ft-lbs	8.9%	1	02-00-12
End Shear	1,968 lbs	11,571 lbs	17%	1	03-01-00
Total Load Defl.	L/999 (0.008")	n/a	n/a	4	02-01-07
Live Load Defl.	L/999 (0.005")	n/a	n/a	5	02-01-07
Max Defl.	0.008"	n/a	n/a	4	02-01-07
Span / Depth	4.6	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"	2,185 lbs	36.5%	12.8%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	1,982 lbs	33.1%	11.6%	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.

CONFORMS TO OBC 2012





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B14(i1105)

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

September 17, 2016 09:47:33

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B14(i1105)

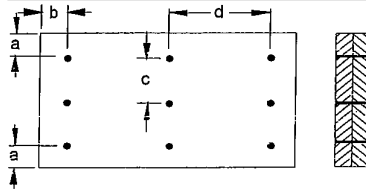
Specifier:

Designer: AJ

Company:

Misc:

Connection Diagram



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

Calculated Side Load = 508.5 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 ~~unex~~ Nails

3 1/2" ARDOX SPIRAL

Disclosure

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P6 2 1/2

DWG NO. TAM 4466D-17
STRUCTURAL
COMPONENT ONLY



Triple 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B15(i1689)

BC CALC® Design Report



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

September 19, 2016 10:24:16

Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B15(i1689)

Specifier:

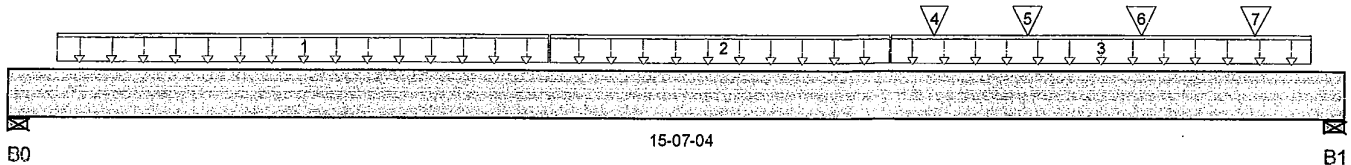
Designer: AJ

Company:

Misc:

Town of Innisfil Certified Model

09/03/2018 9:23:17 AM kgervais



Total Horizontal Product Length = 15-07-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/4"	4,073 / 0	2,204 / 0		
B1, 4"	4,107 / 0	2,220 / 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	00-06-12	06-03-08	536	268			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	06-03-08	10-03-08	560	280			n/a
3	Smoothed Load	Unf. Lin. (lb/ft)	L	10-03-08	15-02-12	286	143			n/a
4	J1(i1839)	Conc. Pt. (lbs)	L	10-09-08	10-09-08	313	157			n/a
5	J2(i1980)	Conc. Pt. (lbs)	L	11-10-12	11-10-12	350	175			n/a
6	J1(i1789)	Conc. Pt. (lbs)	L	13-02-12	13-02-12	397	199			n/a
7	J1(i1791)	Conc. Pt. (lbs)	L	14-06-12	14-06-12	397	199			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	33,882 ft-lbs	82,449 ft-lbs	41.1%	1	07-10-12
End Shear	8,272 lbs	25,578 lbs	32.3%	1	14-01-04
Total Load Defl.	L/448 (0.401")	0.748"	53.6%	4	07-10-12
Live Load Defl.	L/689 (0.261")	0.499"	52.3%	5	07-10-12
Max Defl.	0.401"	n/a	n/a	4	07-10-12
Span / Depth	12.8	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-1/4" x 5-1/4"	8,864 lbs	60.2%	26.4%	Unspecified
B1 Wall/Plate	4" x 5-1/4"	8,936 lbs	79.7%	34.9%	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 UBC 2012



DWG NO. TAM 44661-17
STRUCTURAL
COMPONENT ONLY



Triple 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP 1st Floor Flush Beams\B15(i1689)

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

September 19, 2016 10:24:16

BC CALC® Design Report



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B15(i1689)

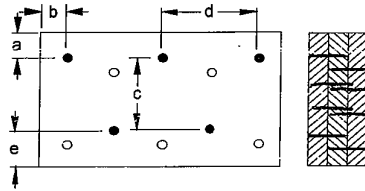
Specifier:

Designer: AJ

Company:

Misc:

Connection Diagram



a minimum = 2"
b minimum = 3"
c = 1 1/4"
d = 6"
e minimum = 2"

Calculated Side Load = 610.7 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.

Nailing schedule applies to both sides of the member.

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

3 1/2" ARDOX SPIRAL

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 1-800-964-0999 before installation.

BC CALO®, 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 44661-17
STRUCTURAL
COMPONENT ONLY



Build 4340

Job Name:

Address:

City, Province, Postal Code: INNISFILL,

Customer:

Code reports: CCMC 12472-R

File Name: S39-2 CORNER OPT SUNKEN.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B7AL(i213

Specifier:

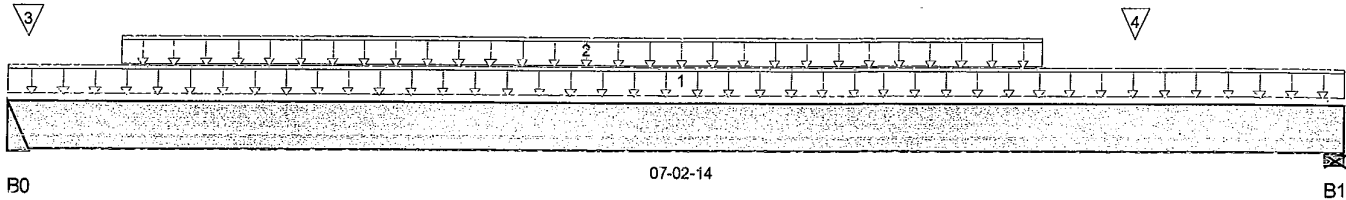
Designer: AJ

Company:

Misc:

Town of Innisfill Certified Model

09/03/2018 9:23:23 AM kgervais



Total Horizontal Product Length = 07-02-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	947 / 0	371 / 0		
B1, 4-3/8"	802 / 0	318 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1 FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-02-14	8	3			n/a
2 Smoothed Load	Unf. Lin. (lb/ft)	L	00-07-04	05-07-04	257	96			n/a
3 J3(i1433)	Conc. Pt. (lbs)	L	00-01-04	00-01-04	169	63			n/a
4 J3(i1396)	Conc. Pt. (lbs)	L	06-01-04	06-01-04	237	89			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,033 ft-lbs	12,704 ft-lbs	23.9%	1	03-01-04
End Shear	1,563 lbs	5,785 lbs	27%	1	06-01-00
Total Load Defl.	L/999 (0.071")	n/a	n/a	4	03-06-08
Live Load Defl.	L/999 (0.051")	n/a	n/a	5	03-06-08
Max Defl.	0.071"	n/a	n/a	4	03-06-08
Span / Depth	8.6	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.

Bearing Supports

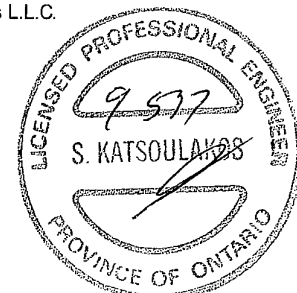
	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	1,884 lbs	n/a	44.1%	Hanger
B1 Wall/Plate	4-3/8" x 1-3/4"	1,600 lbs	39.1%	17.1%	Unspecified

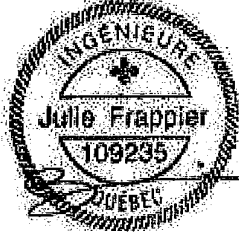
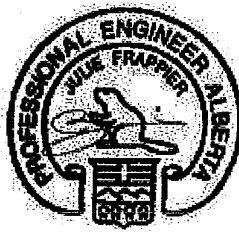
Notes

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 UBC 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.





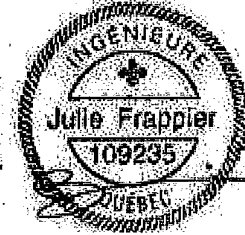
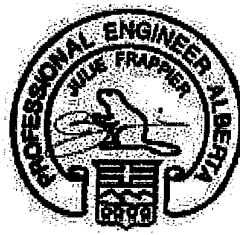
Maximum Floor Spans

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"
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'-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"
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	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"
14"	NI-90x	24'-3"	22'-6"	21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"
	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"
16"	NI-90x	27'-3"	25'-4"	24'-1"	22'-9"	27'-9"	25'-11"	24'-8"	23'-4"
	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.



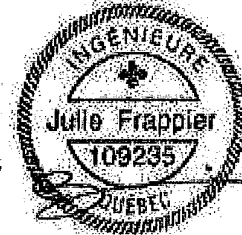
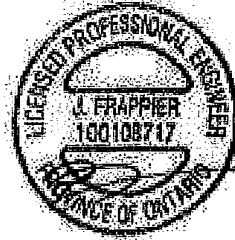
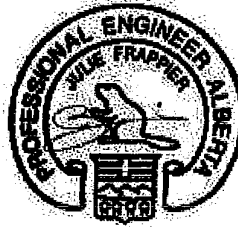
Maximum Floor Spans

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.



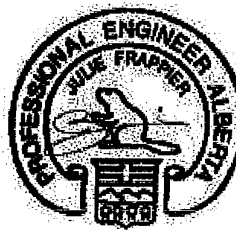
Maximum Floor Spans

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
	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
14"	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
	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
16"	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
	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
14"	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
	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
16"	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"

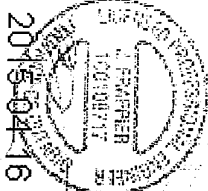
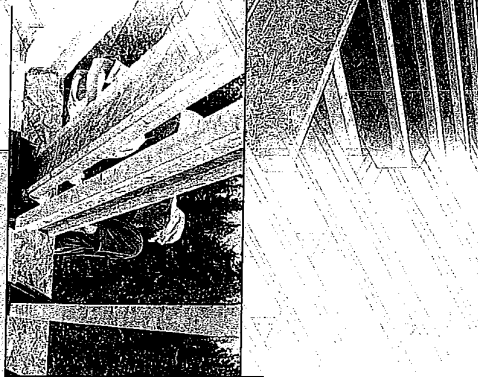
Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-9"	16'-1"	15'-1"	13'-11"	17'-9"	16'-1"	15'-1"	13'-11"
	NI-60	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'-0"	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

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.



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

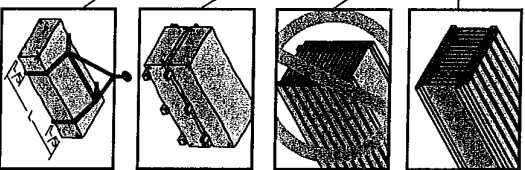


Never stack building materials over unsheathed I-joists. Once sheathed, do not over-stress I-joist with concentrated loads from building materials.

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.

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 5th 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

- 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 1.5 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.
- Spans are based on a composite floor with glued-nail 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.
- Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate 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 uniform loads, an engineering analysis may be required based on the use of the design properties.
- Tables are based on Limit States Design per CAN/CSA O86-09 Standard, and NBC 2010.
- 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"
NI-20	NI-20	15'-1"	11'-2"	9'-5"	8'-5"	14'-3"	10'-4"	8'-10"	7'-7"
	NI-20	15'-1"	11'-2"	9'-5"	8'-5"	14'-3"	10'-4"	8'-10"	7'-7"
	NI-20	15'-1"	11'-2"	9'-5"	8'-5"	14'-3"	10'-4"	8'-10"	7'-7"
	NI-20	15'-1"	11'-2"	9'-5"	8'-5"	14'-3"	10'-4"	8'-10"	7'-7"
NI-24	NI-24	16'-1"	12'-2"	10'-5"	9'-5"	15'-3"	11'-4"	9'-10"	8'-7"
	NI-24	16'-1"	12'-2"	10'-5"	9'-5"	15'-3"	11'-4"	9'-10"	8'-7"
	NI-24	16'-1"	12'-2"	10'-5"	9'-5"	15'-3"	11'-4"	9'-10"	8'-7"
	NI-24	16'-1"	12'-2"	10'-5"	9'-5"	15'-3"	11'-4"	9'-10"	8'-7"
NI-30	NI-30	17'-1"	13'-2"	11'-5"	10'-5"	16'-3"	12'-4"	10'-10"	9'-7"
	NI-30	17'-1"	13'-2"	11'-5"	10'-5"	16'-3"	12'-4"	10'-10"	9'-7"
	NI-30	17'-1"	13'-2"	11'-5"	10'-5"	16'-3"	12'-4"	10'-10"	9'-7"
	NI-30	17'-1"	13'-2"	11'-5"	10'-5"	16'-3"	12'-4"	10'-10"	9'-7"
NI-40	NI-40	18'-1"	14'-2"	12'-5"	11'-5"	17'-3"	13'-4"	11'-10"	10'-7"
	NI-40	18'-1"	14'-2"	12'-5"	11'-5"	17'-3"	13'-4"	11'-10"	10'-7"
	NI-40	18'-1"	14'-2"	12'-5"	11'-5"	17'-3"	13'-4"	11'-10"	10'-7"
	NI-40	18'-1"	14'-2"	12'-5"	11'-5"	17'-3"	13'-4"	11'-10"	10'-7"
NI-60	NI-60	20'-1"	16'-2"	14'-5"	13'-5"	19'-3"	15'-4"	13'-10"	12'-7"
	NI-60	20'-1"	16'-2"	14'-5"	13'-5"	19'-3"	15'-4"	13'-10"	12'-7"
	NI-60	20'-1"	16'-2"	14'-5"	13'-5"	19'-3"	15'-4"	13'-10"	12'-7"
	NI-60	20'-1"	16'-2"	14'-5"	13'-5"	19'-3"	15'-4"	13'-10"	12'-7"
NI-80	NI-80	22'-1"	18'-2"	16'-5"	15'-5"	21'-3"	17'-4"	15'-10"	14'-7"
	NI-80	22'-1"	18'-2"	16'-5"	15'-5"	21'-3"	17'-4"	15'-10"	14'-7"
	NI-80	22'-1"	18'-2"	16'-5"	15'-5"	21'-3"	17'-4"	15'-10"	14'-7"
	NI-80	22'-1"	18'-2"	16'-5"	15'-5"	21'-3"	17'-4"	15'-10"	14'-7"
NI-90	NI-90	23'-1"	19'-2"	17'-5"	16'-5"	22'-3"	18'-4"	16'-10"	15'-7"
	NI-90	23'-1"	19'-2"	17'-5"	16'-5"	22'-3"	18'-4"	16'-10"	15'-7"
	NI-90	23'-1"	19'-2"	17'-5"	16'-5"	22'-3"	18'-4"	16'-10"	15'-7"
	NI-90	23'-1"	19'-2"	17'-5"	16'-5"	22'-3"	18'-4"	16'-10"	15'-7"
NI-120	NI-120	25'-1"	21'-2"	19'-5"	18'-5"	24'-3"	20'-4"	18'-10"	17'-7"
	NI-120	25'-1"	21'-2"	19'-5"	18'-5"	24'-3"	20'-4"	18'-10"	17'-7"
	NI-120	25'-1"	21'-2"	19'-5"	18'-5"	24'-3"	20'-4"	18'-10"	17'-7"
	NI-120	25'-1"	21'-2"	19'-5"	18'-5"	24'-3"	20'-4"	18'-10"	17'-7"

CCMC EVALUATION REPORT 13032-R

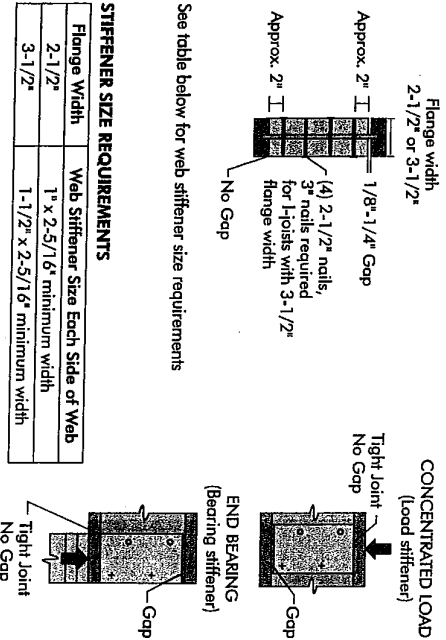
WEB STIFFENERS

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 I-joist 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



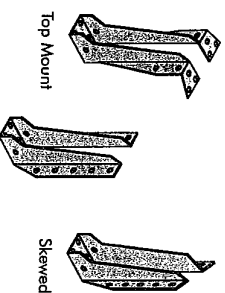
NORDIC I-JOIST SERIES

NI-20	NI-24	NI-30	NI-40	NI-60	NI-80	NI-90	NI-120
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
1950I MSR	2100I MSR	1950I MSR	2100I MSR	2400I MSR	NPG Lumber		

Chantiers Chibougamau Ltd. harvests its own trees, which enables Nordic products to adhere to strict quality control procedures through every phase of the manufacturing process. Every phase of the operation, from forest to the finished product, reflects our commitment to quality. Nordic Engineered Wood I-joists use only finger-jointed, back spruce lumber in their flanges, ensuring consistent quality, superior strength, and longer span carrying capacity.

I-JOIST HANGERS

- Hangers shown illustrate the three most commonly used metal hangers to support I-joists.
- All nailing must meet the hanger manufacturer's recommendations.
- Hangers should be selected based on the joist depth, flange width and load capacity based on the maximum spans.
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.



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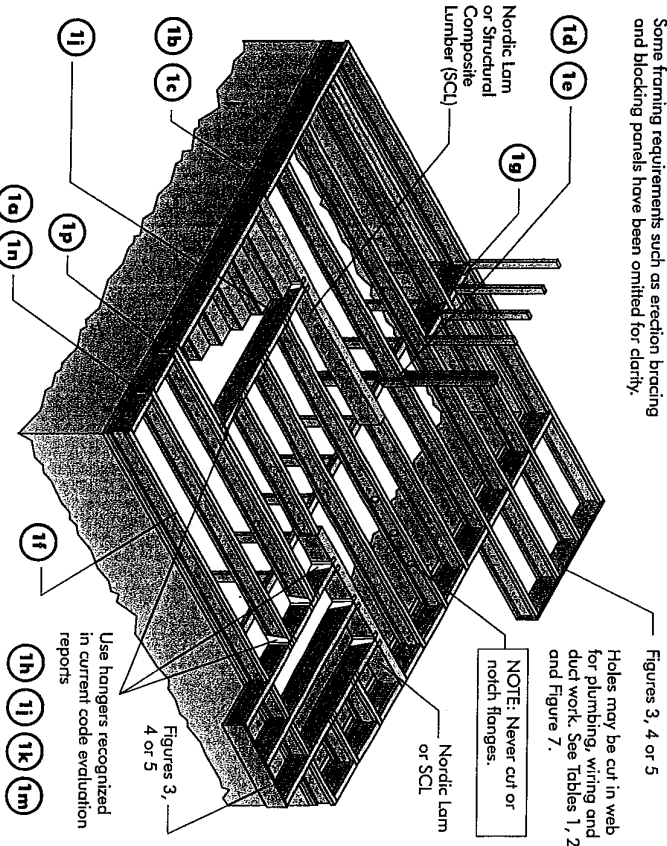
INSTALLING NORDIC I-JOISTS

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 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 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.

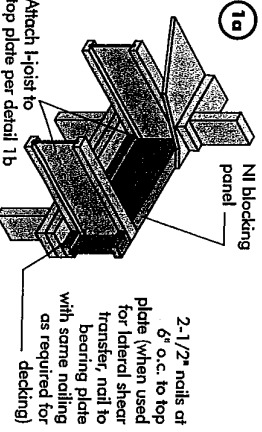


FIGURE 1
TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

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

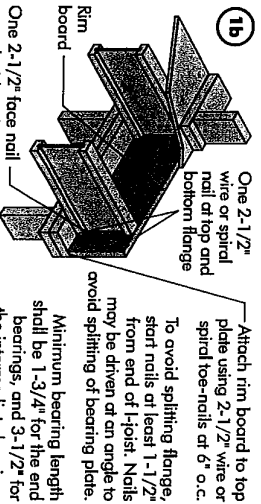


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for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



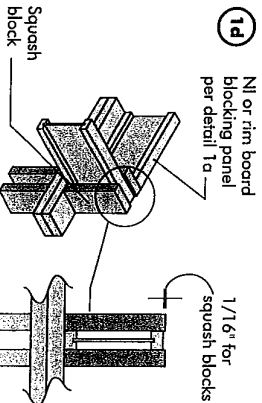
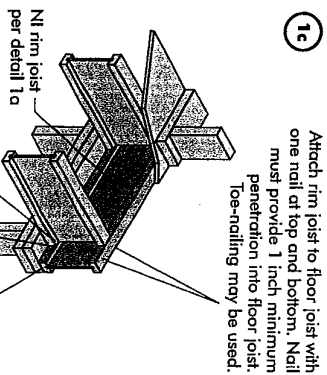
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
NI Joists	3,300

*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.



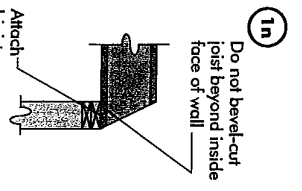
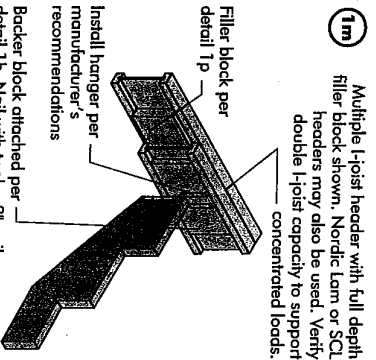
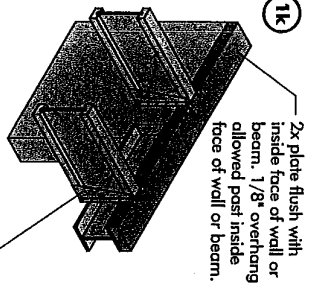
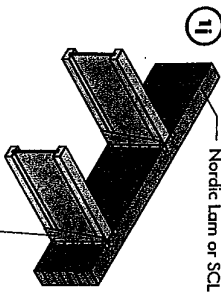
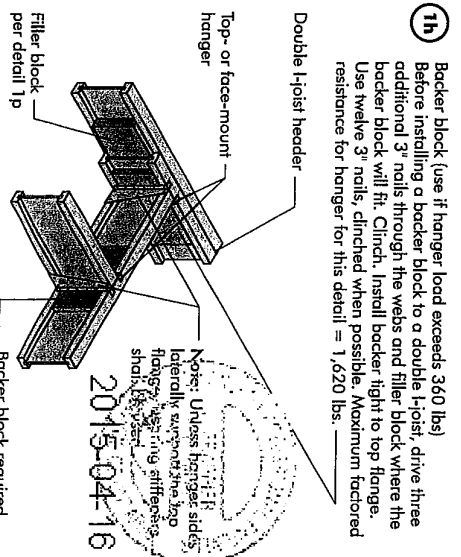
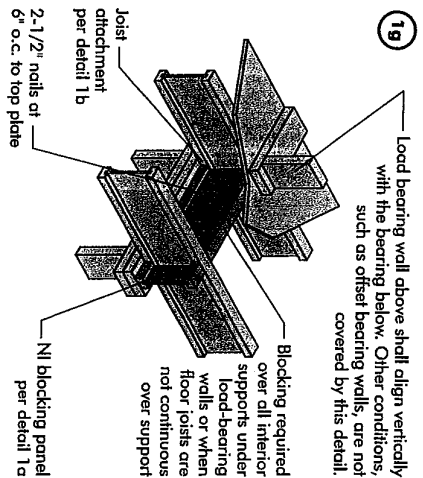
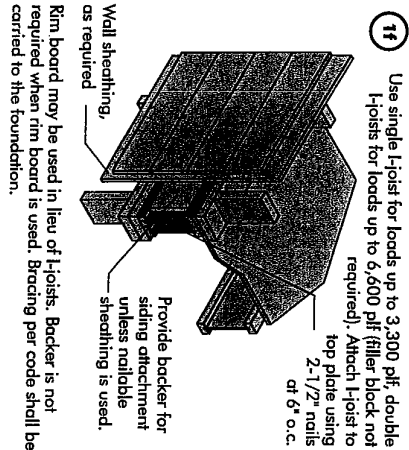
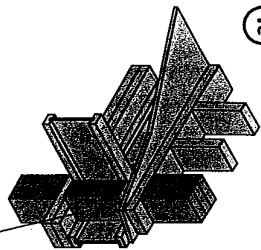
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

*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
	6,500

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



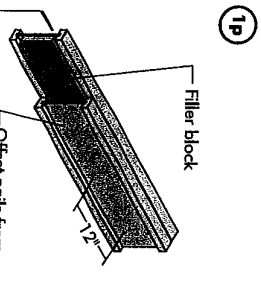
Flange Width	Material Thickness Required*	Minimum Depth**
2-1/2"	1"	5-1/2"
3-1/2"	1-1/2"	7-1/4"

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

For hanger capacity see hanger manufacturer's recommendations. Verify double I-joist capacity to support concentrated loads.

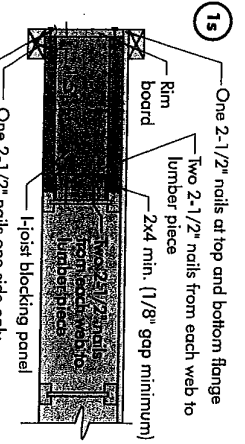
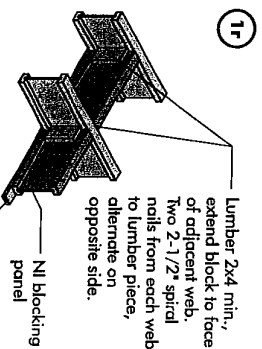
* Minimum grade for backer block material shall be S-P-F No. 2 or better for solid lumber and wood structural panels conforming to CAN/CSA-Q325 or CAN/CSA-Q437 Standard.

** 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".



1. Support back of Hoist web during netting to prevent damage to web/flange connection.
2. Leave a 1/8 to 1/4-inch gap between top of filler block and bottom of top Hoist 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 Hoist. 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/ft. Verry double Hoist capacity.

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

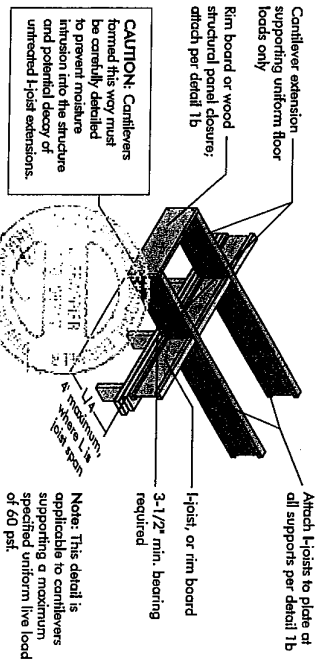


Notes:

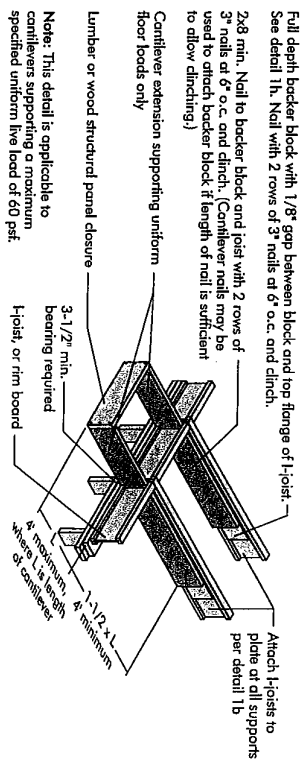
- In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local code requirements for spacing of the blocking.
- All nails are common spiral in this detail.

CANTILEVER DETAILS FOR BALCONIES (NO WALL LOAD)

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

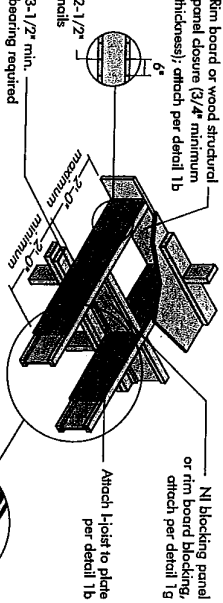


3b) LUMBER CANTILEVER DETAIL FOR BALCONIES (No Wall Load)



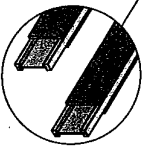
CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

4a) Method 1 — SHEATHING REINFORCEMENT ONE SIDE



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 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.

4b) Alternate Method 2 — DOUBLE I-JOIST

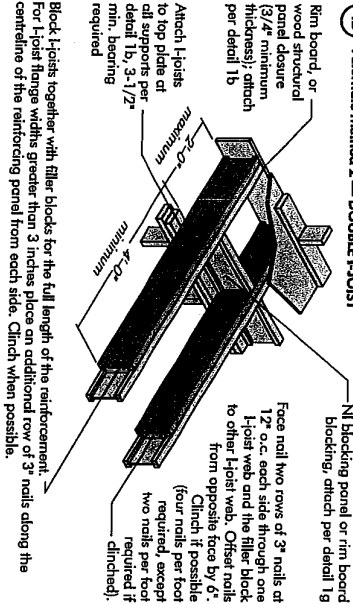
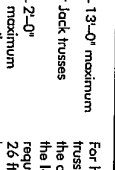
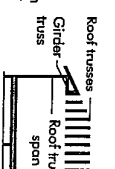
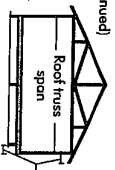


FIGURE 4 (continued)
See table below for NI reinforcement requirements of cantilever.



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

JOIST DEPTH (in.)	ROOF TRUSS SPAN (ft)	ROOF LOADING (UNFACTORED)			
		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.)	LL = 60 psf, DL = 15 psf JOIST SPACING (in.)
12	12	1	1	1	1
12	16	1	1	1	1
12	19.2	1	1	1	1
12	24	1	1	1	1
16	12	1	1	1	1
16	16	1	1	1	1
16	19.2	1	1	1	1
16	24	1	1	1	1
20	12	1	1	1	1
20	16	1	1	1	1
20	19.2	1	1	1	1
20	24	1	1	1	1
24	12	1	1	1	1
24	16	1	1	1	1
24	19.2	1	1	1	1
24	24	1	1	1	1
30	12	1	1	1	1
30	16	1	1	1	1
30	19.2	1	1	1	1
30	24	1	1	1	1
36	12	1	1	1	1
36	16	1	1	1	1
36	19.2	1	1	1	1
36	24	1	1	1	1
40	12	1	1	1	1
40	16	1	1	1	1
40	19.2	1	1	1	1
40	24	1	1	1	1

1. N = No reinforcement required.

2. = NI reinforced with 3/4" wood structural

panel on both sides, or double I-joist.

X = Try a deeper joist or closer spacing.

2. Maximum design load shall be 15 psf roof

and 10 psf floor load, and 80

psf wall load. Wall load is based on 3-0"

maximum width window or door opening.

For larger openings, or multiple 3-0" wide

openings spaced less than 6-0" o.c., addi-

tional joists beneath the opening's cripple

studs may be required.

3. Table applies to joists 12" to 24" o.c. that

meet the floor span requirements for a design

load of 40 psf and dead load of 15 psf,

and a 10 psf deflection limit of L/480. Use

12" o.c. requirements for lesser spacing.

4. For conventional roof construction using a

ridge beam, the Roof Truss Span column

above is equivalent to the distance between

the supporting wall and the ridge beam.

When the roof is framed using a ridge board,

the Roof Truss Span is equivalent to the

distance between the supporting walls as if a

truss is used.

5. Cantilevered joists supporting girder trusses

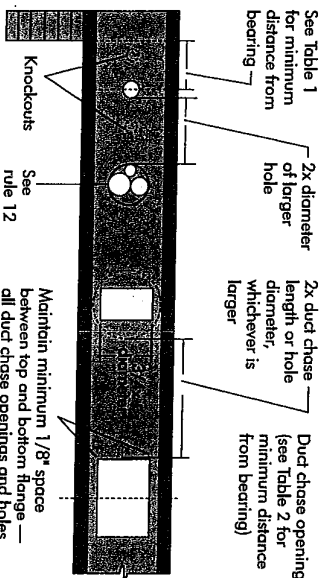
or roof beams may require additional

reinforcing.

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The distance between the inside edge of the support and the centreline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
2. I-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole or the maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole or opening and the adjacent I-joist flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knockout is **not** considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.
9. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
10. All holes and duct chase openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

FIGURE 7
FIELD-CUT HOLE LOCATOR



A knockout is **NOT** considered a hole, may be utilized wherever it occurs and may be ignored for purposes of calculating minimum distances between holes.

TABLE 1
LOCATION OF CIRCULAR HOLES IN JOIST WEBS
Simple or Multiple Span for Dead Loads up to 1

Joist Depth	Joist Series	Minimum distance from inside face of any support to centre of hole (ft.-in.)												Span deflection Factor			
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4		11	12	12-3/4
10	2	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2
12	3	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3
14	4	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4
16	5	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
18	6	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6
20	7	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7
22	8	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
24	9	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
26	10	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0
28	11	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1
30	12	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2
32	13	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3
34	14	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4
36	15	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5
38	16	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6
40	17	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7
42	18	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
44	19	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9
46	20	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
48	21	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1
50	22	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2
52	23	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3
54	24	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4
56	25	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5
58	26	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6
60	27	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7
62	28	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
64	29	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9
66	30	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
68	31	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1
70	32	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2
72	33	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3
74	34	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4
76	35	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5
78	36	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6
80	37	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7
82	38	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8
84	39	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
86	40	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0
88	41	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1
90	42	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2
92	43	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3
94	44	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4
96	45	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5
98	46	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6
100	47	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7
102	48	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8
104	49	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9
106	50	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0
108	51	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1
110	52	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2
112	53	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3
114	54	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4
116	55	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5
118	56	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6
120	57	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7
122	58	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8
124	59	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9
126	60	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0
128	61	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1
130	62	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2
132	63	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3
134	64	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4
136	65	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5
138	66	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6
140	67	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7
142	68	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8
144	69	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9
146	70	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0
148	71	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1
150	72	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2
152	73	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3
154	74	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4
156	75	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5
158	76	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6
160	77	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7
162	78	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8
164	79	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9
166	80	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0
168	81	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1
170	82	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2
172	83	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3
174	84	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3	10.4
176	85	9.0	9.1	9.2													

1. Above table may be used for I-joist spacing of 24 inches on centre or less.
2. Hole location distance is measured from inside face of supports to centre of hole
3. Distances in this chart are based on uniformly loaded joists.

OPTIONAL:

The above table is based on the I-joists used at their maximum span. If the I-joists are placed at less than their full maximum span, the minimum distance from the centreline of the hole to the face of any support (D) as given above may be reduced as follows:

$$D_{\text{reduced}} = \frac{L_{\text{actual}}}{D}$$

Where:

$$\begin{aligned} L_{\text{actual}} &= \\ \text{SAF} &= \end{aligned}$$

distance shall not be less than 6 inches from the face of the support to edge of the span. The actual measured span distance between the inside faces of supports (ft). Span Adjustment Factor given in this table.

The minimum distance from the inside face of any support to centre of hole from this table if $\frac{L_{actual}}{SAF}$ is greater than 1, use 1 in the above calculation for $\frac{L_{actual}}{SAF}$.

TABLE 2
DUCT CHASE OPENING SIZES AND LOCATIONS — Simple Span Only

Joist Depth	Joist Series	Minimum distance from inside face of any support to centre of opening (ft.-in.)									
		8	10	12	14	16	18	20	22	24	
12.5	12.5	4.5	4.5	4.5	5.4	5.8	6.3	6.9	7.5	7.5	
15	15	5.5	5.8	6.0	6.5	7.0	7.5	8.0	8.5	8.5	
17.5	17.5	6.5	6.8	7.0	7.5	8.0	8.5	9.0	9.5	9.5	
20	20	7.5	7.8	8.0	8.5	9.0	9.5	10.0	10.5	10.5	
22.5	22.5	8.5	8.8	9.0	9.5	10.0	10.5	11.0	11.5	11.5	
25	25	9.5	9.8	10.0	10.5	11.0	11.5	12.0	12.5	12.5	
27.5	27.5	10.5	10.8	11.0	11.5	12.0	12.5	13.0	13.5	13.5	
30	30	11.5	11.8	12.0	12.5	13.0	13.5	14.0	14.5	14.5	
32.5	32.5	12.5	12.8	13.0	13.5	14.0	14.5	15.0	15.5	15.5	
35	35	13.5	13.8	14.0	14.5	15.0	15.5	16.0	16.5	16.5	
37.5	37.5	14.5	14.8	15.0	15.5	16.0	16.5	17.0	17.5	17.5	
40	40	15.5	15.8	16.0	16.5	17.0	17.5	18.0	18.5	18.5	
42.5	42.5	16.5	16.8	17.0	17.5	18.0	18.5	19.0	19.5	19.5	
45	45	17.5	17.8	18.0	18.5	19.0	19.5	20.0	20.5	20.5	
47.5	47.5	18.5	18.8	19.0	19.5	20.0	20.5	21.0	21.5	21.5	
50	50	19.5	19.8	20.0	20.5	21.0	21.5	22.0	22.5	22.5	
52.5	52.5	20.5	20.8	21.0	21.5	22.0	22.5	23.0	23.5	23.5	
55	55	21.5	21.8	22.0	22.5	23.0	23.5	24.0	24.5	24.5	
57.5	57.5	22.5	22.8	23.0	23.5	24.0	24.5	25.0	25.5	25.5	
60	60	23.5	23.8	24.0	24.5	25.0	25.5	26.0	26.5	26.5	
62.5	62.5	24.5	24.8	25.0	25.5	26.0	26.5	27.0	27.5	27.5	
65	65	25.5	25.8	26.0	26.5	27.0	27.5	28.0	28.5	28.5	
67.5	67.5	26.5	26.8	27.0	27.5	28.0	28.5	29.0	29.5	29.5	
70	70	27.5	27.8	28.0	28.5	29.0	29.5	30.0	30.5	30.5	
72.5	72.5	28.5	28.8	29.0	29.5	30.0	30.5	31.0	31.5	31.5	
75	75	29.5	29.8	30.0	30.5	31.0	31.5	32.0	32.5	32.5	
77.5	77.5	30.5	30.8	31.0	31.5	32.0	32.5	33.0	33.5	33.5	
80	80	31.5	31.8	32.0	32.5	33.0	33.5	34.0	34.5	34.5	
82.5	82.5	32.5	32.8	33.0	33.5	34.0	34.5	35.0	35.5	35.5	
85	85	33.5	33.8	34.0	34.5	35.0	35.5	36.0	36.5	36.5	
87.5	87.5	34.5	34.8	35.0	35.5	36.0	36.5	37.0	37.5	37.5	
90	90	35.5	35.8	36.0	36.5	37.0	37.5	38.0	38.5	38.5	
92.5	92.5	36.5	36.8	37.0	37.5	38.0	38.5	39.0	39.5	39.5	
95	95	37.5	37.8	38.0	38.5	39.0	39.5	40.0	40.5	40.5	
97.5	97.5	38.5	38.8	39.0	39.5	40.0	40.5	41.0	41.5	41.5	
100	100	39.5	39.8	40.0	40.5	41.0	41.5	42.0	42.5	42.5	
102.5	102.5	40.5	40.8	41.0	41.5	42.0	42.5	43.0	43.5	43.5	
105	105	41.5	41.8	42.0	42.5	43.0	43.5	44.0	44.5	44.5	
107.5	107.5	42.5	42.8	43.0	43.5	44.0	44.5	45.0	45.5	45.5	
110	110	43.5	43.8	44.0	44.5	45.0	45.5	46.0	46.5	46.5	
112.5	112.5	44.5	44.8	45.0	45.5	46.0	46.5	47.0	47.5	47.5	
115	115	45.5	45.8	46.0	46.5	47.0	47.5	48.0	48.5	48.5	
117.5	117.5	46.5	46.8	47.0	47.5	48.0	48.5	49.0	49.5	49.5	
120	120	47.5	47.8	48.0	48.5	49.0	49.5	50.0	50.5	50.5	

1. Above table may be used for 1-post spacing of 24 inches on centre or less.
2. Duct shoes opening location distance is measured from inside face of supports to centre of opening.
3. The above table is based on simple-span joist only. For other applications, contact your local distributor.
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of $L/480$. For other applications, contact your local distributor.



Never drill, cut or notch the flange, or over-cut the web.

Knockouts are precored holes provided for the contractor's convenience to install electrical or small plumbing lines. They are 1-1/2 inches in diameter, and are spaced 15 inches on centre along the length of the I-joist. Where possible, it is preferable to use knockouts instead of field-cut holes.

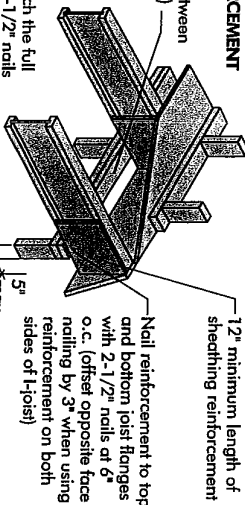
For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

2015-04-16

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

5a SHEATHING REINFORCEMENT

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

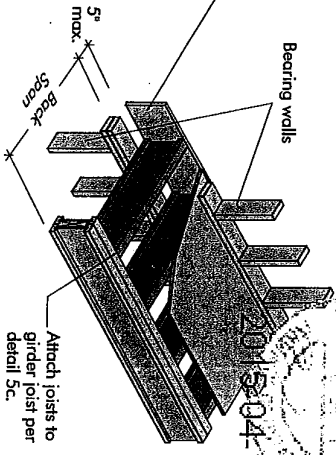


Note: Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail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

5b SET-BACK DETAIL

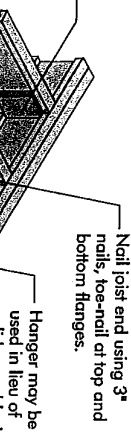
Rim board or wood structural panel closure (3/4" minimum thickness), attach per detail 1b.

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.



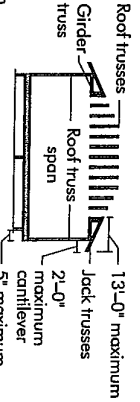
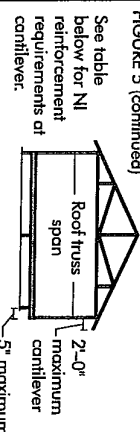
5c SET-BACK CONNECTION

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 SPAN (ft)	ROOF LOADING (UNFACTORED)				LL = 50 psf, DL = 15 psf			
		LL = 30 psf, DL = 15 psf				JOIST SPACING (in.)			
		12	16	19.2	24	12	16	19.2	24
12	26	X	X	X	X	X	X	X	X
12	28	X	X	X	X	X	X	X	X
12	30	X	X	X	X	X	X	X	X
12	32	X	X	X	X	X	X	X	X
12	34	X	X	X	X	X	X	X	X
12	36	X	X	X	X	X	X	X	X
12	38	X	X	X	X	X	X	X	X
12	40	X	X	X	X	X	X	X	X
12	42	X	X	X	X	X	X	X	X
14	26	X	X	X	X	X	X	X	X
14	28	X	X	X	X	X	X	X	X
14	30	X	X	X	X	X	X	X	X
14	32	X	X	X	X	X	X	X	X
14	34	X	X	X	X	X	X	X	X
14	36	X	X	X	X	X	X	X	X
14	38	X	X	X	X	X	X	X	X
14	40	X	X	X	X	X	X	X	X
14	42	X	X	X	X	X	X	X	X
16	26	X	X	X	X	X	X	X	X
16	28	X	X	X	X	X	X	X	X
16	30	X	X	X	X	X	X	X	X
16	32	X	X	X	X	X	X	X	X
16	34	X	X	X	X	X	X	X	X
16	36	X	X	X	X	X	X	X	X
16	38	X	X	X	X	X	X	X	X
16	40	X	X	X	X	X	X	X	X
16	42	X	X	X	X	X	X	X	X

1. N = No reinforcement required.
1 = NI reinforced with 3/4" wood structural panel on one side only.
2. N = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.
X = Try a deeper joist or closer spacing.
3. Maximum design load shall be: 15 psf roof dead load, 55 psf floor total load, and 80 psf wall load. Wall load is based on 3-0" maximum width window or door openings.
4. For larger openings, or multiple 3-0" width openings spaced less than 6-0" o.c., additional joists between the opening's cripple studs may be required.
3. Table applies to joists 12" to 24" o.c. that 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.
5. Cantilevered joists supporting girder trusses or roof beams may require additional reinforcing.

INSTALLING THE GLUED FLOOR SYSTEM

1. Wipe any mud, dirt, water, or ice from I-joist flanges before gluing.
2. Snip 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 tapped 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. Tap 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 oil 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	Ring Thread Nails or Screws	Staples	Edges	Interm. 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.

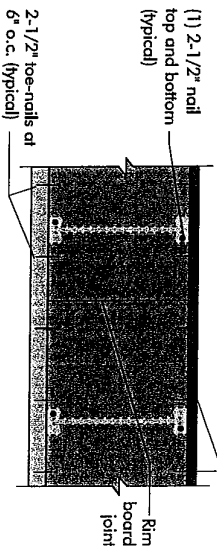
RIM BOARD INSTALLATION DETAILS

8a ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

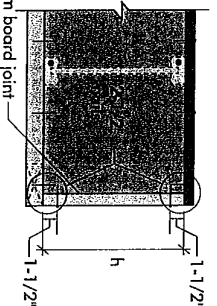
Rim board joint Between Floor Joists

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

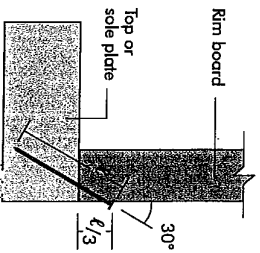
(1) 2-1/2" nail top and bottom (typical)



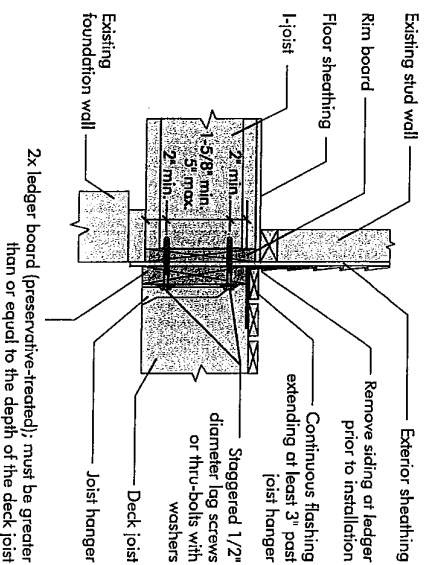
Rim board joint at Corner



8b TOE-NAIL CONNECTION AT RIM BOARD



8c 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL

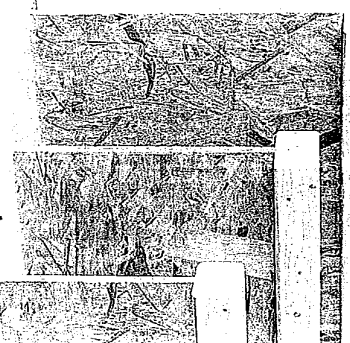


2015-04-16

PRODUCT WARRANTY

Champion's Chingstone guarantees that, in accordance with our specifications, Nerdle products are free from manufacturing defects in material and workmanship.

Furthermore, Champion's Chingstone warrants that our products, when installed in accordance with our building and installation instructions, will meet or exceed our specifications for the lifetime of the structure.



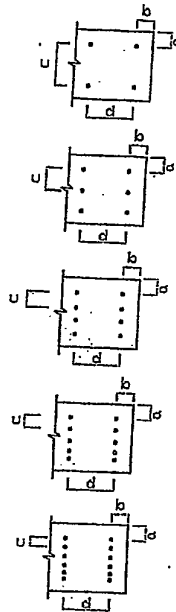
MICRO CITY

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 COPS
BEARING THE
STAMP BELOW

PROVIDE NAILING

DETAIL # X SEE

DWG #TAMN1001-14