



Floor Beam\01

BC CALC® Design Report



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

May-13-15

Build 3272

Job Name: Address:

40297

HUNTINGTON & NASHVILLE

City, Province, Postal Code:KLEINBURG, ON Customer: GOLD PARK

Code reports:

CCMC 12472-R

File Name: 253716.bcc Description: Designs\01

Specifier: 38-1 Designer: MQ

Company: Alpa Roof Trusses Inc

Misc:

	* * *
11.08.00	10 A

B0

11-00-00

В1

Total Horizontal Product Length = 11-08-00

Reaction Summary (Down / Uplift) (lbs)								
Bearing	Live	Dead	Snow	Wind				
B0	463 / 0	202 / 0						
B1	204 / 0	105 / 0						

Load Summary			Liv	e Dead	Snow Wind	Trib.
Tag Description	Load Type	Ref. Start	End 1.0	0 0.65	1.00 1.15	
1	Unf. Area (lb/ft^2)	L 00-00-00	03-04-00 40	15		02-08-00
2	Unf. Area (lb/ft^2)	L. 00-00-00	11-08-00 40	15		00-88-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,585 ft-lbs	12,704 ft-lbs	0.12	1	04-03-01
End Shear	688 lbs	5,785 lbs	0.12	1	00-11-08
Total Load Defl.	L/999 (0.106")	n/a	n/a	4	05-06-04
Live Load Defl.	L/999 (0.071")	n/a	n/a	5	05-06-04
Span / Depth	14.5	n/a	n/a		00-00-00

Bear	ing Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B0	Hanger	2" x 1-3/4"	946 lbs	n/a	0.22	Hanger	_
В1	Hanger	2" x 1-3/4"	437 lbs	n/a	0.1	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 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 4
Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS

O.C., STAGGERED IN TWO ROWS

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of sultability 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.\n\nBC 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.





Floor Beam\02

BC CALC® Design Report



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

May-13-15

Build 3272

Job Name:

40297

HUNTINGTON & NASHVILLE

Address: HUNTINGTON & I
City, Province, Postal Code:KLEINBURG, ON

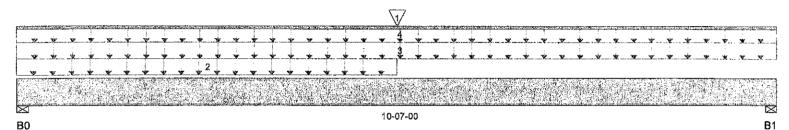
Customer: Code reports: GOLD PARK CCMC 12472-R File Name: 253716.bcc

Description: Designs\02 Specifier: 38-1

Designer: MQ

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 10-07-00

 Reaction Summary (Down / Uplift) (lbs)

 Bearing
 Live
 Dead
 Snow
 Wind

 B0, 3-1/2"
 1,178 / 0
 817 / 0

 B1, 3-1/2"
 533 / 0
 574 / 0

Load Summary				Live	Dead	Snow Wind	Trib.
Tag Description	Load Type	Ref. Start	End	1.00	0.65	1.00 1.15	<u> </u>
1	Conc. Pt. (lbs)	L 05-03-00	05-03-00	204	105		n/a
2	Unf. Area (lb/ft^2)	L 00-00-00	05-03-00	40	15		05-10-00
3	Unf. Area (lb/ft^2)	L 00-00-00	10-07-00	40	20		00-88-00
4	Unf. Lin. (lb/ft)	L 00-00-00	10-07-00	0	60		n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,888 ft-lbs	12,704 ft-lbs	0.46	1	04-08-12
End Shear	2,142 lbs	5,785 lbs	0.37	1	01-01-00
Total Load Defl.	L/411 (0.296")	0.506"	0.58	4	05-01-07
Live Load Defl.	L/736 (0.165")	0.338"	0.49	5	04-11-14
Span / Depth	12.8 ` ′	n/a	n/a		00-00-00

Beari	ng Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0	Wall/Plate	3-1/2" x 1-3/4"	2,789 lbs	0.74	0.37	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 1-3/4"	1,517 lbs	0.4	0.2	Spruce Pine Fir

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 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 4
Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS

O.C., STAGGERED IN TWO ROWS

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.\n\nBC 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.



Floor Beam\03

BC CALC® Design Report



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

May-13-15

Build 3272

Job Name: Address:

40297

HUNTINGTON & NASHVILLE

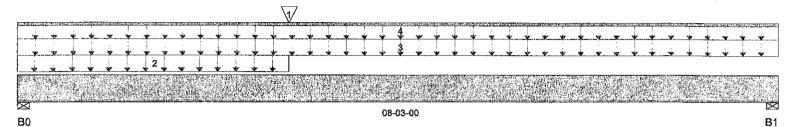
City, Province, Postal Code:KLEINBURG, ON

Customer: Code reports: GOLD PARK CCMC 12472-R File Name: 253716.bcc Description: Designs\03

Specifier: 38-1 Designer: MQ

Company: Alpa Roof Trusses Inc

Misc:



Total Horizontal Product Length = 08-03-00

 Reaction Summary (Down / Uplift) (lbs)

 Bearing
 Live
 Dead
 Snow
 Wind

 B0, 3-1/2"
 986 / 0
 669 / 0

 B1, 3-1/2"
 378 / 0
 433 / 0

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Re	f. Start	End	1.00	0.65	1.00	1.15	
1	Conc. Pt. (lbs)	L.	02-11-00	02-11-00	463	202			n/a
2	Unf. Area (lb/ft^2)	L	00-00-00	02-11-00	40	15			05-10-00
3	Unf. Area (lb/ft^2)	L	00-00-00	08-03-00	40	20			00-08-00
4	Unf. Lin. (lb/ft)	L	00-00-00	08-03-00	0	60			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,698 ft-lbs	12,704 ft-lbs	0.29	1	02-11-00
End Shear	1,668 lbs	5,785 lbs	0.29	1	01-01-00
Total Load Defl.	L/999 (0.103")	n/a	n/a	4	03-10-03
Live Load Defl.	L/999 (0.057")	n/a	n/a	5	03-09-06
Max Defl.	0.103"	n/a	n/a	4	03-10-03
Span / Depth	9.8	n/a	n/a		00-00-00

Beari	ng Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0	Wall/Plate	3-1/2" x 1-3/4"	2,315 lbs	0.61	0.31	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 1-3/4"	1,107 lbs	0.29	0.15	Spruce Pine Fir

Notes

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

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

Design meets User specified (1") Maximum total 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 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 4
Deflections less than 1/8" were ignored in the results.







Floor Beam\04

BC CALC® Design Report



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

Mav-13-15

Build 3272

Job Name:

40297

Address: **HUNTINGTON & NASHVILLE**

City, Province, Postal Code:KLEINBURG, ON

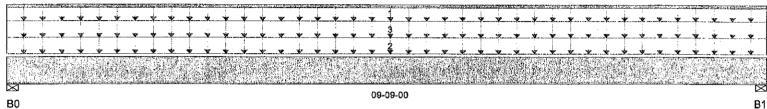
Customer: Code reports:

GOLD PARK CCMC 12472-R File Name: 253716.bcc Description: Designs\04

Specifier: 38-1 Designer: MQ

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 09-09-00

Reaction Summary (Down / Uplift) (lbs)									
Bearing	Live	Dead	Snow	Wind					
B0, 3-1/2"	1,300 / 0	803 / 0			•				
B1, 3-1/2"	1,300 / 0	803 / 0							

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Re	f. Start	End	1.00	0.65	1.00	1.15	
1	Unf. Lin. (lb/ft)	L	00-00-00	09-09-00	0	60			n/a
2	Unf. Area (lb/ft^2)	L	00-00-00	09-09-00	40	15			00-08-00
3	Unf. Area (lb/ft^2)	L	00-00-00	09-09-00	40	15			06-00-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	6,540 ft-lbs	12,704 ft-lbs	0.51	1	04-10-08
End Shear	2,298 lbs	5,785 lbs	0.4	1	01-01-00
Total Load Defl.	L/385 (0.289")	0.465"	0.62	4	04-10-08
Live Load Defl.	L/623 (0.179")	0.31"	0.58	5	04-10-08
Span / Depth	11.7	n/a	n/a		00-00-00

Beari	ng Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0	Wall/Plate	3-1/2" x 1-3/4"	2,954 lbs	0.78	0.4	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 1-3/4"	2,954 lbs	0.78	0.4	Spruce Pine Fir

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 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 4 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS

O.C., STAGGERED IN TWO ROWS

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.\n\nBC 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.





Floor Beam\05

BC CALC® Design Report



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

May-13-15

Build 3272

Job Name: Address:

40297

HUNTINGTON & NASHVILLE

City, Province, Postal Code:KLEINBURG, ON

Customer: Code reports:

B0

GOLD PARK CCMC 12472-R

File Name: 253716,bcc

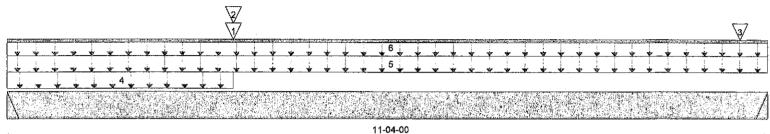
Description: Designs\05 Specifier: 38-1

Designer: MQ

Alpa Roof Trusses Inc. Company:

Wind

Misc:



В1

	rotal Honzontal Product Length = 11-04-00
Reaction Summary (Down	/ Unlift) (the)

Bearing	Live	Dead	Snow	
B0	875 / 0	742 / 0		
B1	814 / 0	719 / 0		

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Re	f. Start	End	1.00	0.65	1.00	1.15	
1	Conc. Pt. (lbs)	L	03-04-00	03-04-00	240	90			n/a
2	Conc. Pt. (lbs)	L	03-04-00	03-04-00	440	165			n/a
3	Conc. Pt. (lbs)	L	10-11-00	10-11-00	440	165			n/a
4	Unf. Area (lb/ft^2)	L	00-00-00	03-04-00	40	15			02-00-00
5	Unf. Area (lb/ft^2)	L	00-00-00	11-04-00	40	20			00-88-00
6	Unf. Lin. (lb/ft)	L	00-00-00	11-04-00	0	60			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,560 ft-lbs	25,408 ft-lbs	0.22	1	03-04-00
End Shear	1,951 lbs	11,571 lbs	0.17	1	00-11-08
Total Load Defl.	L/799 (0.167")	0.556"	0.3	4	05-05-01
Live Load Defl.	L/999 (0.085")	n/a	n/a	5	05-02-07
Span / Depth	14.1	n/a	n/a		00-00-00

Beau	ing Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B0	Hanger	2" x 3-1/2"	2,240 lbs	n/a	0.26	Hanger	
B1	Hanger	2" x 3-1/2"	2,119 lbs	n/a	0.25	Hanger	

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



5.129525



Floor Beam\06

BC CALC® Design Report



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

May-13-15

Build 3272

Job Name:

40297

Address: **HUNTINGTON & NASHVILLE**

City, Province, Postal Code:KLEINBURG, ON

Customer: Code reports: **GOLD PARK**

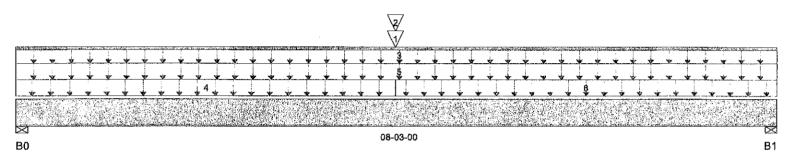
CCMC 12472-R

File Name: 253716.bcc Description: Designs\06

Specifier: 38-1 Designer: MQ

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 08-03-00

Reaction Summary (Down / Uplift) (lbs) Wind Bearing Live Dead Snow B0, 3-1/2" 1,430 / 0 1,118 / 0 B1, 3-1/2" 969 / 0 877 / 0

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Re	f. Start	End	1.00	0.65	1.00	1.15	
1	Conc. Pt. (lbs)	L	04-01-00	04-01-00	875	742			n/a
2	Conc. Pt. (lbs)	L	04-01-00	04-01-00	240	90			n/a
3	Unf. Lin. (lb/ft)	L	00-00-00	08-03-00	0	60			n/a
4	Unf. Area (lb/ft^2)	L	00-00-00	04-01-00	40	20			05-10-00
5	Unf. Area (lb/ft^2)	L	00-00-00	08-03-00	40	20			00-80-00
6	Unf. Area (lb/ft^2)	L	04-01-00	08-03-00	40	15			00-08-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	8,391 ft-lbs	12,704 ft-lbs	0.66	1	04-01-00
End Shear	2,857 lbs	5,785 lbs	0.49	1	01-01-00
Total Load Defl.	L/405 (0.231")	0.39"	0.59	4	04-01-00
Live Load Defl.	L/734 (0.127")	0.26"	0.49	5	04-01-00
Span / Depth	9.8	n/a	n/a		00-00-00

Beari	ng Supports	Dim. (L x W)	Demand	Resistance Support	Resistance Member	Material	
B0	Wall/Plate	3-1/2" x 1-3/4"	3,543 lbs	0.94	0.47	Spruce Pine F	ir
B1	Wall/Plate	3-1/2" x 1-3/4"	2,549 lbs	0.68	0.34	Spruce Pine F	ir

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 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 4 Deflections less than 1/8" were ignored in the results.

User Notes





Floor Beam\07

May-13-15

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

BC CALC® Design Report

HUNTINGTON & NASHVILLE

City, Province, Postal Code:KLEINBURG, ON

Customer: Code reports:

Build 3272

Job Name:

Address:

GOLD PARK CCMC 12472-R

40297

Specifier: Designer:

Company:

File Name: 253716.bcc

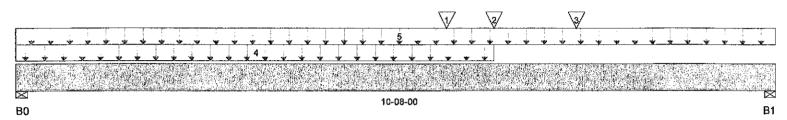
Description: Designs\07

38-1

MQ

Alpa Roof Trusses Inc

Misc:



|--|

Reaction Summary (Down	/ Uplift) (lbs)			· · · · · · · · · · · · · · · · · · ·	
Bearing	Live	Dead	Snow	Wind	
B0, 3-1/2"	1,916 / 0	1,094 / 0			
B1, 3-1/2"	1,819 / 0	1,095 / 0			

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	R	ef. Start	End	1.00	0.65	1.00	1.15	
1	Conc. Pt. (lbs)	Ĺ.	06-00-00	06-00-00	641	282			n/a
2	Conc. Pt. (lbs)	L	06-08-00	06-08-00	814	719			n/a
3	Conc. Pt. (lbs)	L	07-10-00	07-10-00	440	165			n/a
4	Unf. Area (lb/ft^2)	L	00-00-00	06-08-00	40	20			05-10-00
5	Unf. Area (lb/ft^2)	L	00-00-00	10-08-00	40	20			00-88-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos, Moment	14,325 ft-lbs	25,408 ft-lbs	0.56	1	06-00-00
End Shear	4,023 lbs	11,571 lbs	0.35	1	09-07-00
Total Load Defl.	L/348 (0.352")	0.51"	0.69	4	05-06-07
Live Load Defl.	L/554 (0.221")	0.34"	0.65	5	05-04-10
Max Defl.	0.352"	1"	0.35	4	05-06-07
Span / Depth	12.9	n/a	n/a		00-00-00

Bear	ing Supports	Dlm. (L x W)	Demand	Resistance Support	Resistance Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	4,241 lbs	0.56	0.28	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 3-1/2"	4,098 lbs	0.54	0.27	Spruce Pine Fir

Notes

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

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

Design meets User specified (1") Maximum total 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 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 4 Deflections less than 1/8" were ignored in the results.

User Notes NAIL ONG PUT TO ANOTHER WITH 3/5" SPIRE NAINS@ 1216.C., STRUMBURD IN 2 ROWS





Floor Beam\08

May-13-15

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

BC CALC® Design Report

Build 3272 Job Name: Address:

40297

HUNTINGTON & NASHVILLE

City, Province, Postal Code:KLEINBURG, ON Customer:

Code reports:

GOLD PARK

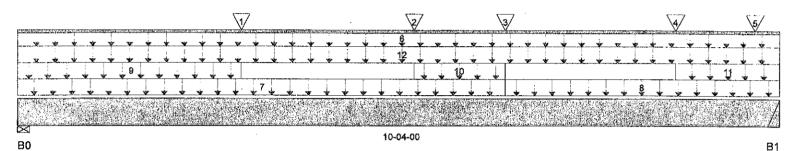
CCMC 12472-R

File Name: 253716,bcc Description: Designs\08

Specifier: 38-1 Designer: MQ

Company: Alpa Roof Trusses Inc

Misc:



Total Horizontal Product Length = 10-04-00

Reaction Summary (Down / Uplift) (lbs) Wind Bearing Dead Live Snow B0, 3-1/2" 1,275 / 0 1,367 / 0 739 / 0 1,575 / 0 **B**1 1,606 / 0 1,353 / 0

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Re	f. Start	End	1.00	0.65	1.00	1.15	
1	Conc. Pt. (lbs)	L	03-00-00	03-00-00	68	69	131		n/a
2	Conc. Pt. (lbs)	L	05-04-00	05-04-00	68	69	131		n/a
3	Conc. Pt. (lbs)	L	06-07-00	06-07-00	68	69	131		n/a
4	Conc. Pt. (lbs)	L	08-11-00	08-11-00	68	69	131		n/a
5	Conc. Pt. (lbs)	L	10-00-00	10-00-00	341	329	651		n/a
6	Unf. Lin. (lb/ft)	L	00-00-00	10-04-00	0	100			n/a
7	Unf. Area (lb/ft^2)	L	00-00-00	06-07-00	40	20			04-03-00
8	Unf. Area (lb/ft^2)	L	06-07-00	10-04-00	40	15			04-03-00
9	Unf. Area (lb/ft^2)	L	00-00-00	03-00-00	11	10	21		04-08-00
10	Unf. Area (lb/ft^2)	L,	05-04-00	06-07-00	11	10	21		04-08-00
11	Unf. Area (lb/ft^2)	L	08-11-00	10-04-00	11	10	21		04-08-00
12	Unf. Area (lb/ft^2)	L	00-00-00	10-04-00	11	10	21		01-08-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	9,655 ft-lbs	25,408 ft-lbs	0.38	1	05-04-00
End Shear	3,369 lbs	11,571 lbs	0.29	1	09-04-08
Total Load Defl.	L/466 (0.258")	0.5"	0.52	11	05-02-04
Live Load Defl.	L/856 (0.14")	0.333"	0.42	15	05-02-04
Max Defl.	0.258"	1"	0.26	11	05-02 - 04
Span / Depth	12.6	n/a	n/a		00-00-00

Bear	ing Supports	Dim. (L x W)	Demand	Resistance Support	Resistance Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	3,991 lbs	0.53	0.27	Spruce Pine Fir
B1	Hanger	2" x 3-1/2"	5,047 lbs	n/a	0.59	Hanger

TO ANOTHER WITH 3/2" SPINOL NAME **Notes**





Double 1-3/4" x 9-1/2" VERSA-LAM® 2,0 3100 SP

Floor Beam\09

BC CALC® Design Report



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

May-13-15

Build 3272

Job Name: Address: 40297

HUNTINGTON & NASHVILLE

City, Province, Postal Code:KLEINBURG, ON Customer: GOLD PARK

Code reports:

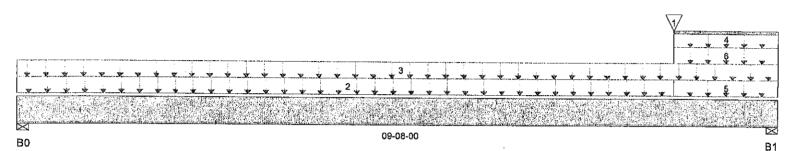
GOLD PARK CCMC 12472-R

File Name: 253716.bcc
Description: Designs\09

Specifier: 38-1 Designer: MQ

Company: Alpa Roof Trusses Inc

Misc:



Total Horizontal Product Length = 09-08-00

 Reaction Summary (Down / Uplift) (lbs)

 Bearing
 Live
 Dead
 Snow
 Wind

 B0, 3-1/2"
 454 / 0
 350 / 0
 179 / 0

 B1, 3-1/2"
 1,777 / 0
 1,823 / 0
 1,510 / 0

Load Summary					Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Re	ef. Start	End	1.00	0.65	1.00	1.15	
1	Conc. Pt. (lbs)	L	08-04-00	08-04-00	1,575	1,606	1.353		n/a
2	Unf. Area (lb/ft^2)	L	00-00-00	08-04-00	40	15	•		00-08-00
3	Unf. Area (lb/ft^2)	L,	00-00-00	09-08-00	40	15			00-08-00
4	Unf. Lin. (lb/ft)	L	08-04-00	09-08-00	0	100			n/a
5	Unf. Area (lb/ft^2)	L	08-04-00	09-08-00	11	10	21		11-00-00
6	Unf. Area (lb/ft^2)	L	08-04-00	09-08-00	11	10	21		01-00-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,723 ft-lbs	25,408 ft-lbs	0.23	1	08-04-00
End Shear	4,981 lbs	11,571 lbs	0.43	1	08-07-00
Total Load Defl.	L/999 (0.108")	n/a	n/a	11	05-04-10
Live Load Defl.	L/999 (0.064")	n/a	n/a	15	05-03-05
Max Defl.	0.108"	n/a	n/a	11	05-04-10
Span / Depth	11.6	n/a	n/a		00-00-00

Beari	ng Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	1,207 lbs	0.16	0.08	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 3-1/2"	5,700 lbs	0.76	0.38	Spruce Pine Fir

Notes

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

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

Design meets User specified (1") Maximum total 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 O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.





Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf Simple Spans, L/360 Deflection Limit 5/8" OSB G&N Sheathing







			В	are			1/2" Gyps	um Ceiling	
Depth	Series		On Cent	e Spacing				e Spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
* **	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
9-1/2"	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"	15¹-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
	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
11-7/8"	N1-60	18'-4"	17¹-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
11-770	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
	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
14"	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
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
16"	Ni-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
10	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

			Mid-Spar	n Blocking		Mid-S	pan Blocking an	d 1/2" Gypsum	Ceiling	
Depth	Series		On Centr	e Spacing		On Centre Spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	N/A	17'-1"	15'-5"	14'-6"	N/A	
	NI-40x	17'-11"	16'-11"	16'-4"	N/A	18'-5"	17'-4"	16'-7"	N/A	
9-1/2"	NI-60	18'-2"	17'-1"	16'-6"	N/A	18'-7"	17'-6"	16'-10"	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"	1.7'~4"	N/A	19'-10"	18'-5"	17'-8"	N/A	
	NI-20	19'-6"	18'-1"	17'-5"	N/A	20'-2"	18'-8"	17'-6"	N/A	
	NI-40×	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	19'-3"	N/A	
11-7/8"	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A	
11-7/0	Nt-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	
	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	
14"	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 ^t -4 ^{tt}	23'-2"	N/A	
	NI-90x	26'-4"	24'-4"	23¹-3 ^u	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	
16"	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	. 26'-5"	25'-2"	N/A	
10	NI-80 1	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A	
	NI-90x	29'-0"	26'-10"	25¹-7"	N/A	29'-7"	27'-5"	261-2"	N/A	

^{1.} 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/360 and a total load deflection limit of L/240.

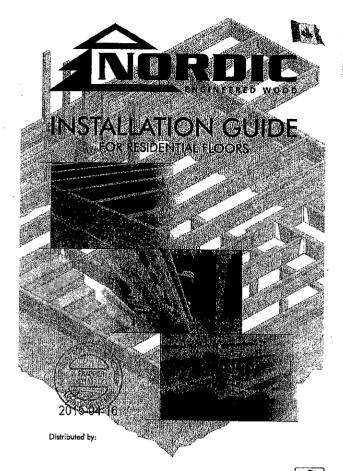
^{2.} Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.

^{3.} Minimum bearing length shall be 1-3/4 inches for the end bearings.

^{4.} Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.

^{5.} This span chart is based on uniform loads. For applications with other than 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 086-09, and NBC 2010.

^{6.} 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.



SAFETY AND CONSTRUCTION PRECAUTIONS





Never stack building materials over materials over unstruction Once shoothed, do not over-stress l-joist with encentrated loads from building materials.

i-joists are not stable until completely installed, and will not carry any load until fully broced and shoothed.

Avoid Accidents by Following these important Guidelines:

- Vetta recession by reasoning more in the first part of the first p
- When the building is completed, the floor sheathing will provide lateral support for the top flonges of the Lipitis. Until this shealthing is applied, lemporary bracing, often colled starts, or temporary sheathing must be applied to prevent Lipiti reflorer or buckling.
- If Temporary broading of struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on centre, and must be secured with o minimum of two 2-1/2° noils instead to the top surface of soci-|cloid. Noil the broading to a lateral restraint at the end of each boy. Lap ends of adjoining broading over affects for 1-loids.
- Oc. shoulding (lemporary or permonent) can be neited to the top flunge 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 neil permanent shealthing to each I-joist before placing loads on the floor system. Then, stock building materials over beams or walls only.
- 5. Never install a damaged t-joist.

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

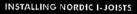
STORAGE AND HANDLING GUIDELINES

- Bundle wrop can be slippery when wet. Avaid wolking on wropped.
- 2. Store, stack, and handle I-jaists vertically and level only. 3. Always stack and handle I-jaists 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
- Bundled units should be kept intact until time of installation.
- When handling Ligists with a crone on the job site, take a few simple precautions to prevent damage to the Ligists and injury to your work craw.
- Pick I-joists in bundles as shipped by the supplier.
- Orient the bundles so that the webs of the (-joists are vertical.
- Pick the bundles of the 5th points, using a spreader bor if necessary.
- 8. Do not handle t-joists in a horizontal orientation.
- 9. NEVER USE OR TRY TO REPAIR A DAMAGED LIGIST.



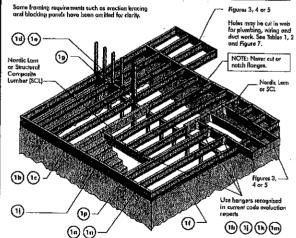




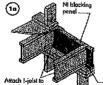


- Before laying out floor system components, varify that i-joint flongs widths match hanger widths. If a supplier.
- 2. Except for cutting to length, I-joist flanges should never be cut, drilled, or notched.
- 3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
- I-laists must be anchored securely to supports before floor shoothing is attached, and supports to be level. 5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for interest
- 6. When using hangers, seat Lights firmly in hanger battoms 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 promite a treatment of the construction should only be applied to the top surface of the top flarge. Narmal concentrated loads include track lighting fishers, audio acquipment and sucurity caractors. Never suspend unusual or heavy loads from the I-joist's bottom flarige. Whanaver possible, suspend all concentrated loads from the top of the I-joist. Or, altach the load to blocking that has been securely fastered to the I-joist velocity.
- 9. Nover install I-joists where they will be permanantly exposed to weather, or where they will remain in direct contact with
- 10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joists or Ligist blocking panels.
- For I-joists installed over and beneath bearing walls, use full depth blacking parells, rim board, or squash blacks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
- 12. Due to strinkage, common framing lumber set on edge may never be used as blocking or tim boards. Lights blocking penals at other engineered vecod products such as rim board must be cut to fit between the Lights, and on Lights-compelitib depth selected.
- 13. Provide permanent lateral support of the bottom flange of all I-joists at laterior supports of multiple-span joists. Simi support the ballom flange of all confileward I-joists of the and support next to the confilewar extension. In the complistracture, the gypsum wallboard celling provides this lateral support. Until the tinol finished ceiling is applied, temporare or struts must be used.
- 14. If square-odge panels are used, adges must be supported between t-joists with 2x4 blocking. Give panels to blocking to minimize squeeks. Blocking is not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment four is instabled.
- 15. Noil specing: Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building class.

TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS



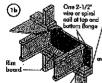
All nolls shown in the above details are assumed to be common wire nails unless otherwise noted. 3' (0.122' dia.) common spiral nails may be substituted for 2-1/2' (0.126' dia.) common spiral nails may be substituted for 2-1/2' (0.126' dia.) common wire nails. Freming furniber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.



2-1/2" nails at 6" o.c. to top date (when used for lateral shear transfer, noil to bearing plate ith same sailing as required for decking)

Blacking Fanel	Maximum Factored Uniform
or Kim Joist	Vertical Load* (pil)
NI Joists	3,300

"The uniform vertical load is limited to a joist depth of 16 inches or loss and is based on standard lerm load durefion. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load translat, see default id.



-Attach rim board to top plate using 2-1/2° wire or spiral tos-nails of 6° o.c.

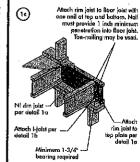
J. FRAPPIER JC010B/12

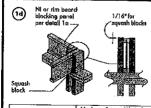
To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. Nails by be driven at an angle to splitting of bearing plate.

Minimum bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for the intermediate bearings when applicable.

ar Rim Joist	Vertical Load* (plf)
1-1/8' Rim Board Plus	8,090
The uniform vertical load is lim	had to a rim board depth of 16 inches

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





Pair of Squash Blocks	Maximum Factored Vertical per Poir of Squash Blocks (lbs)								
	3-1/2' wide	5-1/2*wide							
2x Lumber	5,500	8,500							
1-1/8' Rim Board Plus	4,300	6,600							
Popuida lataral brasina na	se elected 1 - 1 b	1.							





w.nordicewp.com

eler to the Installation Guide for Residential Floors for additional information. CMC EVALUATION REPORT 13032-R

NI-80 NI-90 NLAO MI.70 1-10 1-13-14 ACCUSTION. 23/49 2-1/2 / A OSB 716"+ 1-17 0 1-1/2 A OSB 3/8* --OSB 3/8 OSB 3/of 9.1*/j* 11*-7/6*5 1 100409717 FSC 5-P-F No.2 1950f MSR 2100f MSR 1950f MSR 2100f MSR 2400£MSR NPG Lumber 33 pieces 33 pieces 33 pieces 23 pieces 23 piec

VEB HOLE SPECIFICATIONS

ULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS

The distance between the inside edge of the support and the centreline of any hale or duct chase opening shall be in compliance with the requirements of

I-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified. Whenever possible, field-cut holes should be centred on the middle of the web. The maximum size hale or the maximum depth of a duct chase opening that The maximum size note or the maximum depin or a use across opening ma-can be cut into an 1-joist web shall equal the clear distance between the flanges of the 1-joist minus 1/4 indn. A minimum of 1/8 indn should always be maintained between the top or bottom of the hole or opening and the adjacent L-joist flange.

- 5. The sides of square holes or longest sides of rectongular 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 rectongular hole or duct chase opening) and each hole and duct chase opening shall be sized and located in semi-flag and the size.
- in compliance with the requirements of Tables 1 and 2, respectively.

 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
- 8. Holes measuring 1-1/2 inches or smaller are permitted anywhere in a cantilevered section of a joist. Floles of greater size may be permitted subject to verification.
- 9. A 1-1/2 inch hate or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
- All holes and duct chaise openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as
- 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.

OCATION OF CIRCULAR HOLES IN JOIST WEBS

mple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

Joist	Joist	Minimum Distance from Insido Face of Any Support to Centre of Hole (ft - in.)														
	Series								e Diam							
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	71	12	12-3/4
	NI-20	0"-7"	1'-6"	2'-10"	4'-3"	5'-8"	6'-0"		***			***				
	NI-40x	0'-7"	ገ'-6 "	3'-0"	4'-4"	6'-0"	6'-4"			***		***				
-1/2°	NI-60	1'-3"	2'-6"	4'-0"	51-4"	7'-0"	7'-5"					***				
į	NJ-70	2'-0"	3'-4"	4'-9"	6'-3"	8'-()"	8'-4"						***			
	NI-80	2'-3"	3'-6"	5'-0"	6'-6"	8'-2"	8'-8"	***					P.0.5			
	NI-20	0'-7"	0'-8"	1'-0"	2'-4"	3'-8'	4'-0"	5'-0"	6'-6"	7'-9"			***			
	NI-40x	0'-7"	0'-8"	1'-3"	2'-8"	4'-0"	4'-4"	5'-5'	7'-0"	8'-4"			***			
	NI-60	0'-7"	T'-8"	3'-0"	4'-3"	5.9	6'-0"	7'-3"	8'-10"	10'-0"	-					***
1-7/8" (NJ-70	1'-3"	2'-6"	4'-0"	5'-4"	ď-9'	7'-2"	8'-4"	10'-0"	11-2"						
- 1	NI-80	1º-6"	2'-10"	4'-2"	5'-6"	7'-0"	7'-5"	8'-6"	10'-3"	1144						***
- !	NI-90	0'-7"	0'-8"	1'-5"	3'-2"	4'-10"	5'-4"	6'-9"	8'-9"	10'-2"		***				
1	NI-90x	0'-7"	0'-8"	0'-9"	25"	4'-4"	4'-9"	6'-3"		***		*				
	NI-40x	0'-7"	0'-8"	0'-8"	1'-0"	2'-4"	2'-9"	3'-9"	5'-2"	6'-0"	6'-6"	81-3E	10'-2"			
- 1	NI-60	0'-7"	0'-8"	1'-8"	34~0"	4'-3"	4'-8"	5'-8"	7'-2"	8'-0"	81-81	10-4	ינו ו			
1"	NI-70	0'-8"	1'-10"	3'-0"	4'-5"	5'-10"	6'-2"	7'-3"	B'-9"	9'-9"	10'-4"	12'-0"	13'-5"			***
' Ì	NI-80	0'-10"	2'-0"	3'-4"	4'-9"	6'-2"	6'-5"	7-6	9'-0"	10-01	10.8		13'-9"			
	NI-90	0'-7"	0'-8"	0'-10"	2'-5"	4'-0"	4'-5"	5'-9"	7'-5"	8'-8"	9-4"	11-4	12-11"			
	NI-90x	0'-7"	0'-8"	0'-8"	2'-0"	31.9"	4'-2"	5'-5'	71-31	8'-5"	9'-2"					
7	NI-60	Q'-7"	0'-8"	0'-8"	1'-6"	2'-10"	3-2	4'-2"	5'-6"	6'-4"	7'-0"	8'-5"	9-80	10-2	<u> </u>	13.9
1	NJ-70	0'-7"	1'-0"	2'-3"	3'-6"	4'-10"	5'-3"	6'-3"	7'-8"	8'-6"	9-2	10-8		12-4		15'6"
5"	NI-80	0'-7"	1'-3"	2-6"	3'-10"	5'-3"	5'-6"	6'-6"	8'-0"	91-01	9-5	11'-0"	12:-3"	12-9		16'-0"
İ	NI-90	04-7*	0'-8"	0'-8"	149"	3'-3"	3'-8"	4.9	6'-5"	7'-5"	8'-0"		1143	11.9		15'.4"
	Ni-90x	0'-7"	0'-8"	0'-9"	2'-0"	3'-6"	4'-0"	5-0	61.0"	7'.0'	81.4*	105.20		17 0	12-7	15.4

Above table may be used for 1-joist spacing of 24 incles on centre or less.

Hole location distance is measured from inside face of supports to centre of hole.

Distances in this chart are based on uniformly loaded joists.

The above table is based on the 1-joists being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

DUCT CHASE OPENING SIZES AND LOCATIONS

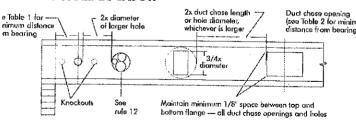
Joist	F- 7-4	Minim	um distar	nce from in	iside face	of supp	orts to c	entre of	openino	(ft - in.)					
Depth	Joist Series		Minimum distance from inside face of supports to centre of opening (ft - in.) Duct Chase Length (in.)												
		. 8	10	12	14	16	18	20	22 '	24					
	NI-20	4'-1"	4'-5"	4'-10"	5'-4'	5'-8"	6'-1"	6'-6"	7'-1"	7'-5"					
	NJ-40x	5'-3"	5 8	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8-2"	8'-6"					
9-1/2"	NI-60	5'-4"	5-9	6'-2"	6'-7"	7-1	7'-5"	8 0	8'-3"	8'-9"					
	NI-70	5'-1"	5'-5"	5'-10"	6'-3"	6'-7"	7'-1"	7'-6"	8'-1"	8'-4"					
	NJ-80	5'-3"	5'-8"	6'-0"	61-5"	6'-10"	7:3"	7'-8"	81-2#	8'-6"					
	NI-20	5'-9"	6'-2"	6'-6"	7'-1"	7-5	7'-9"	8'-3"	8-9	9'-4"					
	NI-40x	6'-8"	7'-2"	7'-6"	81-14	8'-6"	9'-1"	9-6	10'-1"	10.9					
	NI-60	71.3"	7'-8"	8'-0"	81-6"	9'-0"	91.34	9-9	10'-3"	11.0					
11-7/8"	NI-70	7'-1"	7'-4"	7'-9"	81-31	8'-7"	יין ייפ	9-6	10-3	10' 4"					
	NI-80	7'-2"	7'-7"	8°-0°	81-5"	8'-10"	9-34	9'-8"	10-2	10'-8"					
	NI-90	7'-6"	7-11"	8'-4"	8-7	9'-2"	91.7"	10-1"	10'-7"	10-0-					
	NI-90x	7'-7"	8'-1"	8'-5"	8' 10"	9-4	9'-8"	10-2"	10'-8"	11-2					
	NI-40x	8'-1"	8'-7"	9'-0"	9-6	10'-1"	10'-7"	111-2"	12'-0"	12'-8"					
	NI-60	8'-9"	9-3"	9'-8"	10'-1"	0'-6"	11-1	11.6	13'-3"	13'-0"					
14*	NI-70	8'-7"	9'-1"	9-5"	9'-10"	10'-4"	10'-8"	11 2	13-3	12'-3"					
14	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7*	11-1-	11.6	12'-1"	12'-6"					
	NI-90	9'-2"	9'-8"	10'0"	10'-6"	10,11		11.9	12'-4"	12'-11"					
	NI-90x	9'-4"	9'-9"	10'-3"	10'-7"	11111	11 7"	12-1	12'-7	13'-2"					
	NJ-60	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	14'-1"	14'-10"					
ľ	NI-70	10'-1"	10'-5"	11'-0"	11'-4"			12'-8"	13-3"	14'-0"					
16"	NI-80	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12-7	13'-1"	13'-8"	14'-4"					
	NJ-90	10'-9"	111-2"	11'-8"	12'-0"	12'-6"	13'-0"	13-6"	14'-2"	14'-10"					
	NJ-90x	17-19	11.5"	11' 10"	12'-4"			13-9	14-4	15'-2"					

Above table may be used for f-joist spacing of 24 inches on centre or less.
 Duct chase opening location distance is measured from inside face of supports to centre of opening.
 The above table is based on simple-span joists only. For other applications, contact your local distributor.
 Oistances 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 deflaction limit of L/480.
 The above table is based on the I-joists being used at their maximum spans. The minimum distance as along above may be reduced for sharter senses, contact your local distributor.

given above may be reduced for shorter spans; contact your local distributor.

BURE 7

ELD-CUT HOLE LOCATOR





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

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

Holes in webs should be cut with a sharp saw.

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 dritting 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.

\FETY AND CONSTRUCTION PRECAUTIONS



Do not walk on I-joists until tilly fastened and braced, or



wer stack building materials er unsheathed l-joists. One realhed, do not over-stress ists with concentrated loads from building materials.

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

AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

- Broce and nail each l-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging at joist ands.
 When l-joists are applied continuous over inlends supports and a load-bearing wall is planned at that location, blocking will be required at the interior support.
- When the building is completed, the floor sheathing will provide lateral support for the top flanges of the L-joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent L-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 contre, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each L-joist. Nail like bracing to a lateral restraint at the end of each boy. Lop ends of adjoining bracing over at least two 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 confilewored ligists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridging. Install and fully noil 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 Ligist.

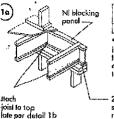
Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Nordic Lipists, failure to follow allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines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



PRODUCT WARRANTY

Chantiers Chibougaman guarantees that, in accordance with our specifications, Nordic products are free from manufacturing defects in material and workmanship.

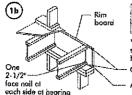
Furthermore, Chantlers Chibougaman warrants that our products, ben utilized in accordance with our handling and installation instructions, will meet or exceed our specifications for the lifetime of the structure.



Blocking Ponel	Maximum Factored Uniform
or Rim Joist	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

 $2\text{-}1/2^\circ$ nails at 6° o.c. to top plate (when used for lateral shear transfer, noil to bearing plate with same nailing as required for decking)



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

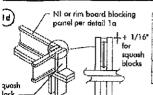
"The uniform vertical load is limited to a tim board depth of 16 inches or less and is based on standord term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.

One 2-1/2" wire or spiral nail at top and bottom flange

Altach rim board to top plate using 2-1/2" wire or spiral toe-nails at 6" o.c.

To avoid splitting flange, start nails at least 1-1/2" from end of t-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

Minimum bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for the intermediate bearings when applicable.

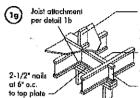


Pair of Squash Blocks	Vertical La	n Factored ad per Pair Blocks (lbs)
	3-1/2" wide	5-1/2" wide
2x Lumber	5,500	8,500
1-1/8" Rim Board Plus	4,300	6,600

Provide lateral bracing per detail 1a or 1b



Transfer load from obove to bearing below Install squash olocks per detail Id. Match bearing area of blacks below to post above.



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

Blocking required over all interior supports under load-bearing walls or when floor joists are not continuous over support

NI blocking panel per detail 1a

th)

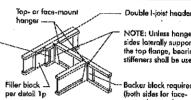
Bucker block (use if hanger load exceeds 360 lbs). Before installing a backer block to a double I-joist, drive three additional 3" nails through the webs and filler black where the backer block will fit. Clinch. Install backer light to top flange. Use twelve 3" nails, clinched when possible. Maximum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

ACKER BLOCKS (Blocks must be long enough to parmit required nailing without splitting)

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

Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-O437 Standard.

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



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

Backer block required (both sides for facemount hongers)

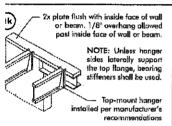
For hanger capacity see hanger manufacturer's ndutions. Varify double I-joist capacity to support concentrated loads.

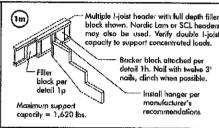


Structural Composite Lumber (SCL) For nailing schedules for multiple beams, see the manufacturer's

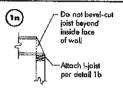
recommendations. Top- or face-mount hanger

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





block shown. Nordic Lam or SCL headers may also be used. Verify double 1-joist capacity to support concentrated loads. Backer block attached per detail 1h. Nail with twelve 3" nails, clinch when possible. Install basser per recommendations



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

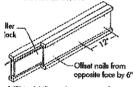


Lumber 2x4 min., extend block to face of adjacent web. Two 2-1/2" spiral nails from each web to lumber piece, alternate on opposite side.

NI blocking panel

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



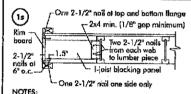


-1/6" to 1/4" gap between top flange and tiller block

NOTES:

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

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



- 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.

VEB STIFFENERS

ECOMMENDATIONS:

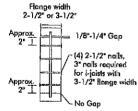
A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found of the I-joist Construction Guide (C101). The gap between the stiffener and the flange is at

A **bearing stiffener** is required when the I-joist is supported in a hanger and the sides of the honger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.

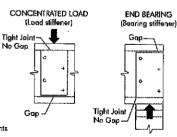
A load stiffener is required at locations where a factored concentrated toad greater than 2,370 lbs is applied to the top flonge between supports, or in the case of a cantilever, anywhere between the cartilever tip and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the battern.

FIGURE 2

WEB STIFFENER INSTALLATION DETAILS



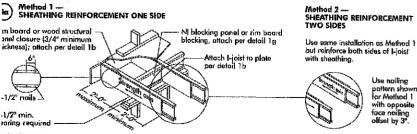
See the adjacent table for web stiffener size requirements



STIFFENER SIZE REQUIREMENTS

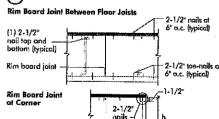
Neb Stiffener Size Each Side of Web 1" x 2-5/16* 2-1/2" 1402-x 2-5/16" 3-1/2" Cheldolog von a faappier 00 idaz 17

ANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET



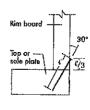
OTE: Conadian softwood plywood sheathing at equivalent (minimum thickness 3/4") required on sides of joist. Depth shall atch the full height of the joist. Noil with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach oist to plate at all supports per detail 1b.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

RIM BOARD INSTALLATION DETAILS (Ba) ATTACHMENT DETAILS WHERE RIM BOARDS ABUT



1-1/2

Rim board joint



WEB HOLES

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

- 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.
- I-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified.
- Whenever possible, field-cut holes should be centred on the middle of the web.
- The mostman size hale or the maximum depth of a duct chase opening that can be out late an i-joint web shall aqual the clear distance between the flanges of the i-joint 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 adjocant i-joint lange.
- 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.
- Where more than one hole is necessory, the distance between ordication. Where more than one hole is necessory, the distance between ordicate hele edges shall exceed twice the diameter of the largest round hole or twice the stee of the largest accure hole or twice the largest round hole or twice the largest ractangular hole or duct chase spening) and each hole and duct that opening shall be sized and incated in compilarize with the requirements of Tobias 1 and 2, respectively.
- 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.
- Holes measuring 1-1/2 inches or smaller shall be permitted onlywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to
- A 1-1/2 inch hale or smaller can be placed anywhere in the web provided that if
 meets the requirements of rule number 6 above.
- All holes and duct chose openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Faure 7.
- 1). Limit three maximum size holes per span, of which one may be a duct chase
- 12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole arcumscribed ground them.

TABLE ? LOCATION OF CIRCULAR HOLES IN JOIST WEBS Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 ps

taiot	laist		Min	intun	dist	anco	from	insti	ir fagi	i af (my styp	part i	á ¢áni	re of l	iolo (f	(dict	77.5	11	Spari
Dopth											melar								adjustnieri
MANAGE AND ASSESSED.	CONTRACTOR CONTRACTOR	2	3	4	5	6	64	1/4	7	. 8	,8-5/2	9	10	10-3/			Z 1	2-3/1	Foctor
		V G			30	500				127	1		對機		1	极进	¥ 6	-84	
		44.4	26.			H 1	以 。	191	-2				9.4	911		3.14	340		
		2.3			0	3.04	ů.	1		1		144	24			20		133	
Y 54	理問題	10.2		100	2		4140		10	3,6	7.0	127	12.1	H			7		
	3 30 30		10.00	200	3.5	100		74.		2	410.00	1	11.25	Y	地泊	4394	d di	5.5	
	3,570	110	4	10	2	Ж.,				Q.				(4)				3	
		130			38	3		75	•	10%	103		装套	1055	***			1	
		7-2	(Albaha	28.	4.	34	11.31	0 (D)	431.	æ.	D-Mar	/线	銀座		2km	a) &	8		28 (0.25)
			直提)			2	0.0		i ki	5.		30	排品	1				泉區	
		9.8	VIO.	70	AND T	120	0			7.0	100	4104	细胞	(1987)	1	700	0	C. N	497
		14.00		Min.	34	APPLICATION OF	No.	2.86		27		10,5	嬴挫	. (B)	6 3.2	0.5	4.5	105	
		0.71	10	0.8	7			1.5	55	70	6 52	7	X	1			Į.		
		27	经供	9.5	1		2 0	6.53	12	6.6	\$1.8 1	20	0.6	1	200		4	4.2	
	Kalendos i	17.5	48		20	强力	II di	6.6	16	80	45.6	165	\$1.0	12.3	32	熱板	in the	18.0	专业
		72		0.8)]. 	3				4.5	7.5	9.0	- 1.0		1	19	O P	连引	
1 Above tele	do mor be word	for 1 in in		- 6 2				. I.a.a	-44-	v-7				Street, which		NO NO	Trans	*****	PERSONAL PROPERTY.

- Above table may be used for I-jobs specing of 24 inches on centre or less. Hole location distance is measured from inside foce of supports to centre of hole. Distances in this chart are based on uniformly located joists.

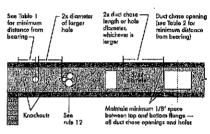
OPTIONAL:

The above table is based on site i-joists used at their maximum span. If the t-jaists are placed at less than their full maximum span (see the minimum distance from the controlline of the traje to the face of any support (D) as given above they be reduced as follows:

Orectuced = Lactual x D

Discorce from the inside face of any support to contro all bole, reduced for loss-thon-maximal discorce shall not be less fine 5 inches from the face of the support to edge of the bole. The actival reservant year distorce obviousn the intelligence of supports of edge of the bole. Spen Alphalment Fedor given in this table. Spen Alphalment Fedor given in this table. The minimum discore from the intelligence for one purpose of the state of hele from this table. If settled is greater than 1, use 1 in the above calesdation for facing.

FIGURE 7 FIELD-CUT HOLE LOCATOR



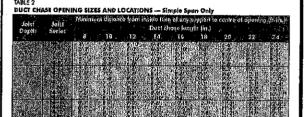
A knockout is NOT considered a hole, may be utilized wherever it occurs and may be ignored for purposes of calculating minimum distances between holes.

Knockouts are prescored holes provided for the contrador's convenience to install electrical or small plumbing lines. They are 1-1/2 inches in diometer, and are spaced 15 inches on centre along the length of the 1-joist. Where possible, it is



notch the flonge, over-cut the web.

The rectangular holes, ovoid over-cutting the corners, as this can cause wrine esser stress concentrations. Slightly sounding the corners is recommended. Staring the creates in each of the over corners and then making the cut beloveen the holes is enotined to have corners and then making the cut beloveen the holes is enotined to previously the holes is enotined to maintain the making the cut beloveen the holes is enotined good mailed to minimize damage to the I-joist.



2015-04-16

Above table may be used for I-joist spancing of 24 inches on center or light state of the property of the prop

INSTALLING THE GLUED FLOOR SYSTEM

- 1. Wipe any mud, dirt, water, or ice from l-joist flanges before glying.
- Snap a chalk line across the t-joists four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
- Spread only anough glue to lay one or two panels of a time, or follow specific recommendations from the glue manufacturer.
- 4. Lay the first panel with tangue side to the wall, and not in place. This protects the tangue of the next panel from damage when tapped into place with a block and sledgehammer.
- Apply a continuous line of give (about 1/4-inch diameter) to the top floringe of a single 1-joist. Apply give in a winding patiern on wide creas, such as with double 1-joists.
- 6. Apply two lines of give on L-joists where panel ends buil to assure proper giving 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 an i-joist Ranges.
- 8. Top the second row of panels into place, using a block to protect groove edges.
- Stagger and joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch at all adjess, including T&G edges, is recommanded. (Use a spacer tool or on 2-1/2" common nail to assure occurate and consistent spacing.)
- 10. Complete all noiling of each purel liefere glue sets. Check the monetacturer's recommendation for ours time. (Worm weather accelerates glue setting.) Use 2" ring- or screw-shank noils for panels 3/4-inch thick or less, and 2-1/2" ring- or screw-shank noils for thicker panels. Space noils per the table below. Closer noil spacing may be required by some acdes, or for diaphragm construction. The finished diack can be walked on right away and will carry construction loads without damage to the club band.

FASTENERS FOR SHEATHING AND SUBFLOORING(1)

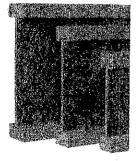
Maximum EDhimum Mill Papel Spacing Thichness (m) (ii)	Contilled With the Spired Notil	uil Size and Ty Rink Through Notic or Service	Stuples	Manufit of Fo	n Späcinger i Unione Inform Supports
5.6	2"	1-3/4"	2*	6"	12"
2012	2.	1-3/4"	2*	6" .	12*
24 1 1 10/4	. 2	1.3/4"	2"	6*	12"

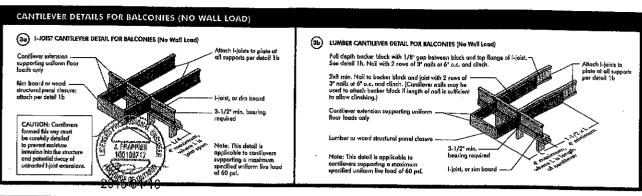
- 1. Fosteners of sheathing and subfloaring shall conform to the above table.
- Staples shall not be less than 1/16-inch in diameter or thickness, with not less than a 3/8-inch crown driven with the crown parallel to framing.
- 3. Flooring scraws shall not be less than 1/8-inch in diameter
- Special conditions may impose heavy traffic and concentrated leads that require construction in excess
 of the minimum shown.
- 5. Use only adhesives conforming to CAN/CGSB-71.26 Standard, Adhesives for Field-Giving Plyw Lumber Freming for Floor System, applied in accordance with the manufacturar's recommendation OSB panets with sealed surfaces and edges are to be used, use only solven-based glase; check
- Ref.: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

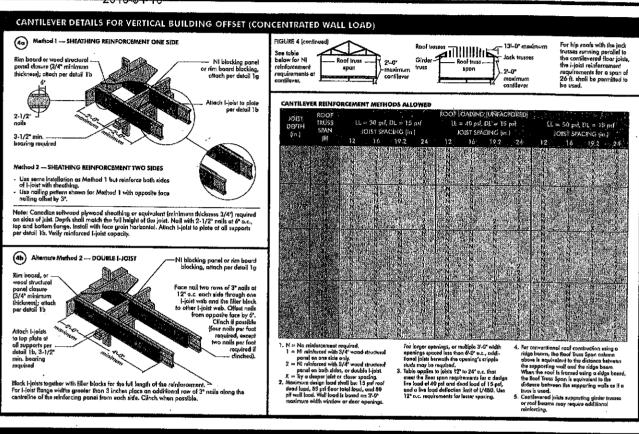
unconcent treats:
Floor sheathing must be field plued to the I-joist Ranges in order to achieve the maxim spans shown in this document. If sheathing is nailed only, I-joist spans must be verified your load distributor,

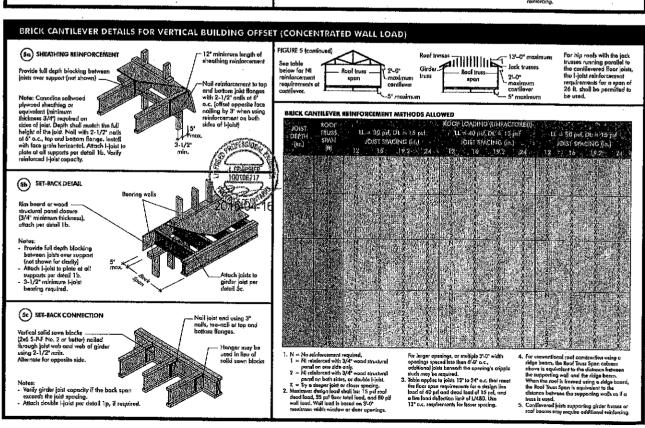
RIM BOARD INSTALLATION DETAILS (80) ATTACHMENT DETAILS WHERE RIM BOARDS ABUT Rim board Joint Between Floor Joists 2-1/2" nails at 6" a.c. (typical) Rim board Joint at Corne 1-1/2" (11.2-1*/*2" anii ₹1.1/2° 8b TOE-NAIL CONNECTION AT RIM BOARD (Bc) 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL Exterior shepihing Rim board Floor sheathing Continuous flashing ading at least 3" past Joist hangar l-joist Staggered 1/2* diameter log screws or thru-bolts with Existing Soundation 1 FRAPPISH 100100717 2x ladger board (preservative-treated); must be greater than or equal to the depth of the deck joint







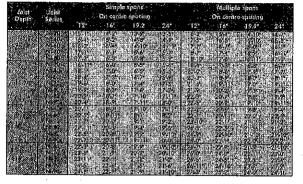




MAXIMUM FLOOR SPANS

- Maximum clear spens applicable to simple-span or studies span and earlied floor construction with a design live load of 40 pt and dead to do of 15 pt. The utilizate limit atota are based on the factored loads of 1.501. + 1.250. The extracebility limit status include the consideration for floor vibration and a live load deflection limit of L/480. For multiple-span applications, the end speas shall be 40% or more of the ediparent span.
- 2. Spans are based on a composite floor with glued-noised oriented strand board (OSB) shoothing with a ratinitiven thickness of 5/6 inch for a joist spacing of 19.2 linches roless, or 3/4 inch for joist spacing of 24 inches. Adhesive shall meet the regulements (sive in COSB)-71.26
 Standard. No concrete topping or bridging element was assumed. Increased spans may be achieved with the used of gypsum and/or a row of blocking or intid-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.
- 5. This spon chart is based on uniform loads. For applications with other than uniform loads, on animering analysis may be required based on the use of the design properties.
- Tables are based on Limit States Design per CAN/CSA OB6-09 Standard, and NBC 2010.
- 7. 5I units conversion: 1 inch = 25.4 mm 1 foot = 9.305 m

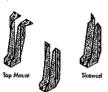
MAXIMUM FLOOR SPANS FOR NORDIC LIGISTS



COMC EVALUATION REPORT 13032-R

I-JOIST HANGERS

- 2. All nothing must meet the hanger manufacturer's recommendations
- 3. Hangers should be selected based on the joist depth, flonge width and load capacity based on the
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flonge of the I-joist.



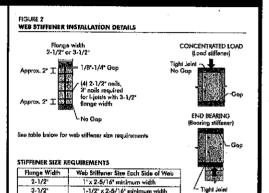
WEB STIFFENERS

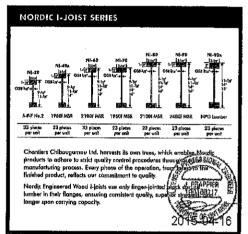
å.

RECOMMENDATIONS:

- A bearing stiffener is required in all angineered applications with factored reactions greater than shown in the I-joist properties table found of the I-joist construction Guide (C101). The gap believe the stiffener and the flange is at the top.
- A bearing stiffener is required when the 1-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 A rotal statistical required of lecoliticity where a factored concentrated load greeter than 7,370 libs is applied to the top flange between supports, or in the case of a cantillerer, anywhere between the cantilerer in the support. These values are for standard term load discription, and may be adjusted for other load durations as permitted. by the code. The gap between the stiffener and the flange is at the battom.

SI units conversion: 1 Inch = 25.4 mm







Transfer load from above to -bearing below. Install squash flocks per detail 1d. Match bearing area of blocks below to post above.

Use single I-joist for loads up to 3,300 plf, double I-joists for loads up to 4,600 plf (filler block not required). Attach I-joist to

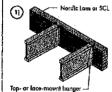
Rim board may be used in lieu of I-joists. Backer is not required when rim board is used. Bracing per code shall be carried to the foundation.

iood bearing wall above shall align vertically with the bearing below. Other conditions, such as offset bearing walls, are not covered by this detail, ⑯ attachment per delaif 16 NI blocking panel per detall 1 a

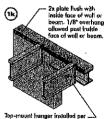
(1)

l-joist per detail 1 b

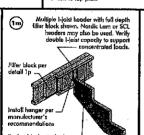
Do not bevel-cut joist beyond inside face of wall



For nailing schedules for multiple beams, see the manufacturer's

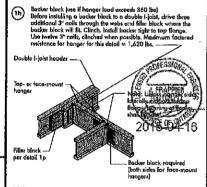


Note: Unless hanger sides laterally support the top flance, bearing support the top flange, be stiffeners shall be used.



Backer block attached per detail the Nail with twelve 3" nails, clinch when possible.

Maximum support capacity = 1.620 lbs.



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

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

- Minimum grade for backer block material shall be S-P-P No. 2 or better for solid sown lumber and wood structural penels conforming to CAN/CS-0.0255 or CAN/CS-0.0437 Standard: For face-mount hangers was not joint depth minus 3-1/4" for joints with 1-1/2" black tlanges. For 2" thick flanges was not depth minus 4-1/4".

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

- Support back of I-joist web during nailing to prevent damage to web/flange connection.
- Leave a 1/8 to 1/4-inch gap between top of tiller black and bottom of top I-joist flange.
- flange.

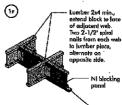
 3. Filler block is required between joists for full length of spec.

 4. Noil joists logether with two rows of 3" mails of 12 inches o.c., clinched when possible) on each side of the double I-joist. Total of four neils per four required, if nails can be clinched, only two nails per foot are required.

 5. The markets.
- The maximum factored load that may be applied to one side of the double joist using this detail is 860 lbl/fr. Verify double 1-joist capacity.

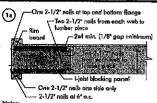


Flange Size	Joist Depth	Filler Block Size
2-1/2° x 1-1/2°	9-1/2" 11-7/8" 14" 16'	2-1/8" x 6" 2-1/8" x 8" 2-1/8" x 10" 2-1/8" x 12"
3-1/2* x 1-1/2*	9-1/2" 11-7/8" 14" 16"	3' x 6' 3' x 8' 3' x 10' 3' x 12'
3-1/2° k 2°	11-7/6° 14° 16°	3" x 7" 3" x 9" 3" x 11"



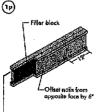
Nate: Slocking require at bearing for lateral support, not shown for clarity.

Optional: Minimum 1x4 (nch —— strap applied to underside of joist at blacking line or 1/2 inch minimum gypsum coiling attached to underside of joists.



- Notes:
 In some local codes, blocking is prescriptively required in
 the first joint space for first and second joint space; and to
 the state joint. When sequired, see local code requiremen
 for spacing of the blocking.

 All noils are common spiral in this dotail.



-1/8" to 1/4" gap between top flangs and filler block