

		Products		
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-40x	1	11
J1DJ	14-00-00	9 1/2" NI-40x	2	8
J2	12-00-00	9 1/2" NI-40x	1	29
J3	10-00-00	9 1/2" NI-40x	1	21
J4	6-00-00	9 1/2" NI-40x	1	1
J5	4-00-00	9 1/2" NI-40x	1	6
J6	2-00-00	9 1/2" NI-40x	1	2
В3	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B16	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B1	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B4	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B6L	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B5	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

C	connector	Summary
Qty	Manuf	Product
9	H1	IUS2.56/9.5
9	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
7	H1	IUS2.56/9.5
2	H2	HUS1.81/10
2	H2	HUS1.81/10



FROM PLAN DATED:

BUILDER: BAYVIEW WELLINGTON

SITE: PASSAGE ON THE CANAL

MODEL: TH9C

ELEVATION: B

LOT: 1

CITY: ST CATHERINES

SALESMAN: M D DESIGNER: AJ REVISION:

NOTES:

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

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND

FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. CERAMIC TILE

RIMBOARD CLOSURE AT ENDS. SEE

APPLICATION AS PER O.B.C 9.30.6.

LOADING:

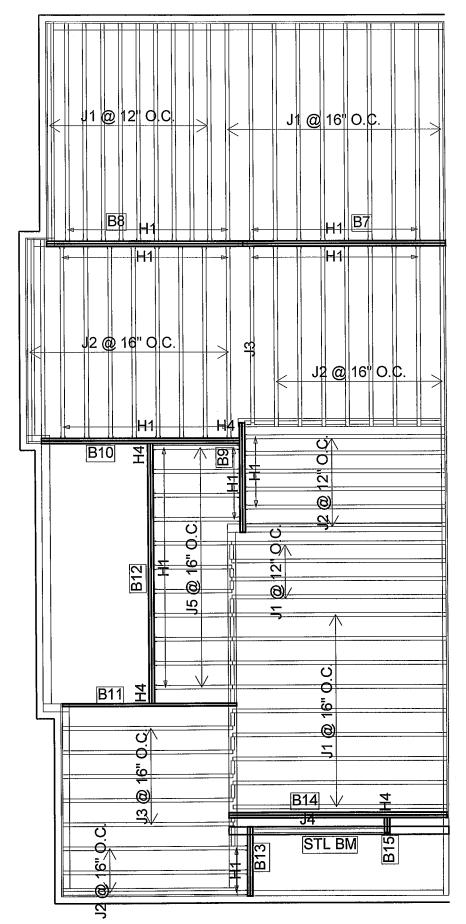
DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft² TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2019-01-29

1st FLOOR

SUNKEN OPTION



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-40x	1	33
J2	12-00-00	9 1/2" NI-40x	1	27
J3	10-00-00	9 1/2" NI-40x	1	6
J4	8-00-00	9 1/2" NI-40x	1	1
J5	6-00-00	9 1/2" NI-40x	1	11
B12	16-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B14	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B10	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B7	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B8	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B11	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B9	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B15	2-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2

С	onnector	Summary
Qty	Manuf	Product
65	H1	IUS2.56/9.5
1	H4	HGUS410
3	H4	HGUS410



FROM PLAN DATED:

BUILDER: BAYVIEW WELLINGTON

SITE: PASSAGE ON THE CANAL

MODEL: TH9C

ELEVATION: B

LOT: 1

CITY: ST CATHERINES

SALESMAN: M D DESIGNER: AJ REVISION:

NOTES:

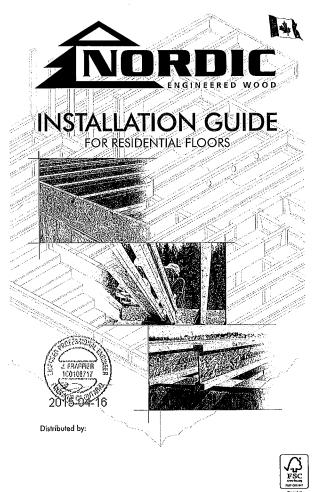
REFER TO THE NORDIC **INSTALLATION GUIDE FOR PROPER** STORAGE AND INSTALLATION. **SQUASH BLOCKS** OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURE 7 TABLES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7 TABLES 1 & 2 OF THE INSTALLATION GUIDE. CERAMIC TILE APPLICATION AS PER O.B.C. 9.30.6 LOADING:

DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 10/30/2018

2nd FLOOR







Do not walk on I-joists until fully fastened and braced, or serious inju-



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

l-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

- Brace and noil each I-joist as it is installed, using hangers, blacking panels, rim board, and/or cross-bridging at joist ends. When I-joists are applied continuous over interior supports and a load-bearing well is planned at that location, blacking 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 I-joints. Until this sheathing is applied, temporary bracing, often colled struts, or temporary sheathing must be applied to prevent I-joist rollover or buckling.
- Temporary bracing or struct wous be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on centre, and must be secured with a minimum of two 2-1/2" noils fastened to the top surface of each Ljoist. Noil the bracing to a lateral restraint at the end of each bay. Lop ends of adjoining bracing over at least two Ljoists.
- 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.
- For contilevered 1-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridging.
- Install and fully nail permanent sheathing to each t-joist before placing loads on the floor system. Then, stack building materials over beams or walls only. 5. Never install a damaged 1-joist.

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 requir can result in serious accidents. Failow these installation guidelines corefully.

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 15 psf. The utilized limit states are based on the factored loads of 1.500. + 1.250. The serviceability limit states include the consideration for floor vibration and a live load deflection limit of 1/480. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- 2. Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joint spacing of 19.2 inches or less, or 3/4 inch for joist spacing of 24 inches. Adhesive shall meet the requirements given in COSB-7-12.6 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 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.
- 7. SI units conversion: 1 inch = 25.4 mm 1 foot = 0.305 m

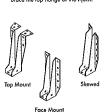
MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS

			Simple	spans	0.000		Multiple	spans	
Joist Depth	Joist Series	Very Court	On centre	spacing			On centre	spacing	
Рерш	Jenes	12"	16"	19.2	24°	12"	16"	19.2"	24°
	NI 20	15'-1"	14'-2"	13'-9"	13'-5"	16'-3"	15'-4"	14'-10'	14'-7"
7, 3775	NI-40x	16'-1"	15'-2"	14'-8"	14'-9"	17'-5"	16'-5"	15'-10'	15'-5"
9-1/2*	NI-60	16'-3"	15'-4"	14'-10"	14'-11'	17'-7"	16'-7"	16'-0"	16'-1"
1.0	NI-70	17'-1"	16'-1"	15'-6"	15'-7'	18'-7"	17'-4"	16'-9"	16'-10"
D : 254	NI-80	17-3	16'-3"	15'-8'	15*-9*	18'-10'	17'-6"	16'-11"	17'-0"
1,1510	NI-20.	16-11	16'-0"	15'-5"	15'-6"	18'-4"	17'-3"	16'-8"	16'-7"
21.50	NI-40x	18'-1"	17'-0"	16'-5"	16'-6"	20'-0"	18'-6"	17'-9"	17'-7"
	NI-60	18'-4"	17'-3"	16'-7"	16'-9"	20'-3"	18'-9"	18'-0"	18'-1"
11-7/8	NI-70	19'-6"	18'-0"	17'-4"	17'-5"	21'-6"	19'-11'	19'-0"	19'-1"
	NI-80	19-9*	18'-3'	17'-6"	17'-7'	21'-9'	20'-2"	19'-3"	19'-4"
	NI-90	20'-2"	18'-7"	17:-10*	17'-11"	22'-3"	20'-7"	19'-8'	19'-9"
	NI-90x	20'-4"	18'-9"	17'-11"	18'-0"	22'-5*	20'-9"	19'-10"	19'-11'
47.35	NI-40x	20'-1"	18'-7"	17'-10"	17'-11"	22'-2"	20'-6*	19'-8"	19'-4"
kata atau	NI-60	20'-5"	18'-11"	18'-1"	18'-2"	22'-7"	20'-11"	20'-0"	20'-1"
	NI-70	21'-7'	20'-0"	19'-1"	19'-2"	23'-10°	22'-1"	21'-1'	21'-2'
14"	NI-80	21:11"	20'-3"	19'-4'	19'-5"	24'-3"	22'-5"	21'-5"	21'-6"
100000	NI-90	22'-5"	20'-8"	19'-9"	19'-10"	24'-9'	22'-10"	21'-10"	211-101
24 (12%) 8	NI-90x	22'-7"	20'-11"	19'-11"	20'-0"	25'-0"	23'-1"	22'-0"	22'-2"
5,725 to	NI-60	22'-3'	20'-8"	19'-9"	19'-10"	24-7	22'-9"	21'-9"	21'-10'
PM activities	NI-70	23'-6"	21'-9"	20:-9"	20'-10"	26'-0"	24'-0"	22'-11"	23'-0"
16"	NI-80	23'-11"	22'-1"	21'-1"	21'-2'	26'-5"	24'-5"	23'-3"	23'-4"
	NI-90	24'-5"	22'-6"	21'-5"	21'-6'	26'-11"	24'-10"	23'-9"	23'-9'
4.71.5.2.5	NI-90x	24'-8"	22'-9"	21'-9"	21'-10"	27'-3"	25'-2"	24'-0"	24'-1"

Hangers shown illustrate the three most commonly used metal hanger to support 1-joists.

1-JOIST HANGERS

- 2. All nailing must meet the hanger Hangers should be selected based
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.



CCMC EVALUATION REPORT 13032-R

NORDIC I-JOIST SERIES



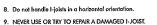
- 1. Bundle wrap can be slippery when wet. Avoid walking on wrapped
- 2. Store, stack, and handle I-joists vertically and level only. -
- 3. Always stack and handle I-joists in the upright position only. -
- 4. Do not store I-joists in direct contact with the ground and/or flatwise 5. Protect I-joists from weather, and use spacers to separate bundles. -
- 6. Bundled units should be kept intact until time of installation.
- 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.

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

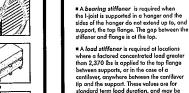
(1) (1)

(II)

■ Pick the bundles at the 5th points, using a spreader bar if necessar



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



10

Figures 3, 4 or 5

and Figure 7.

Holes may be cut in web for plumbing, wiring and duct work. See Tables 1, 2

amente did indigs is a time by.

A load stiffener is required at locations where a factored concentrated load greater than 2,370 Uss is applied to the top flange between supports, or in the case of a confliever, 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.

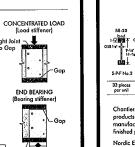
SI units conversion: 1 inch = 25.4 mm

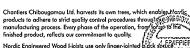
(4) 2-1/2" nails, 3" nails required for I-joists with 3-1/2" flange width END BEARING See table below for web stiffener size requirements STIFFENER SIZE REQUIREMENTS Flange Width Web Stiffener Size Each Side of Web 1" x 2-5/16" minimum width 1-1/2" x 2-5/16" minimum width

(19)

FIGURE 2
WEB STIFFENER INSTALLATION DETAILS

Approx. 2* _ 1/8*-1/4* Gap





Nordic Engineered Wood Ljoists use only linger-jointed back sputs 100 Medic in their flonges, ensyring consistent quality, superior streets and longer span corrying coposity. 1422 2015-04-16

9-1/2" 11-7/2" 14" 16"

9.1/2° 11.7/2° 14°

INSTALLING NORDIC I-JOISTS

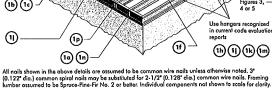
- 1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, continued to 2. Except for cutting to length, 1-joist flanges should never be cut, drilled, or notched.
- 3. Install 1-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment. 4. t-joists must be anchored securely to supports before floor sheathing is attached, and supports to be level
- 5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate be
- 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 into in those that can narmally 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 Ljoist's bottom flange. Whenever possible, suspend all concentrated loads from the top of the Ljoist. Or, attach the load to blocking that has been securely fastened to the Ljoist webs.
- 9. Never install I-joists where they will be permanently 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 I-joist blocking panel

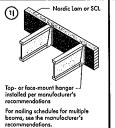
6" o.c. to top

- 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 an I-joist-composible depth selected. 13. Provide permanent lateral support of the bottom flange of all 1-joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all contilevered 1-joists of the end support next to the contilever extension. In the completed structure, the gypsum validator defiling provides this lateral support. Until the final finished ceiting 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 flonge's top face in accordance with the applicable building code requirements a approved building plans.

NOTE: Never cut or notch flanges. 19 (b) (te

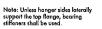
TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

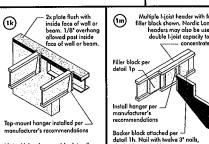


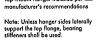


ransfer load from above to

bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above.

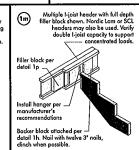






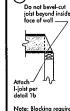
Use single I-joist for loads up to 3,300 plf, double 1-joists for loads up to 6,600 plf (filler block not required). Attach I-joist to

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



Aaximum support capacity = 1,620 lbs.

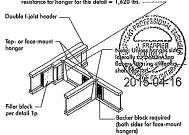
atlachment per detail 1b



(In)

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

(h) Backer block (use if hanger load exceeds 360 lbs)
Before instelling a backer block to a double I-joist, drive three
additional 3 noils through the webs and filler block 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.



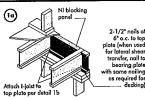
For hanger capacity see hanger manufact Verify double I-joist capacity to support co

BACKER BLOCKS (Blocks must be long enough to permit required

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

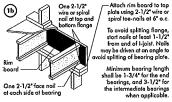
Minimum grade for backer block material shall be S-PF No. 2 or better for solid sown lumber and wood structurel ponels conforming to CAN/CSA-0325 or CAN/CSA-0347 Standard.

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



o o.c. to top
plote (when used
for lateral shear
transfer, nall to
bearing plote
with same nailing
as required for
decking)

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 dura inches or less and is based on standard term load autoin 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.

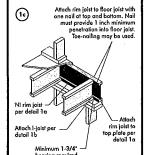


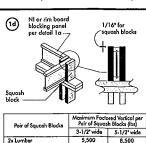
—Attach rim board to top plate using 2-1/2" wire or spiral toe-nails at 6" o.c. To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. Nails nay be driven at an angle to d splitting of bearing plate

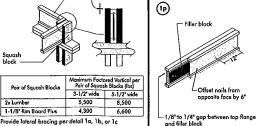
A FRAFFISH 100101717

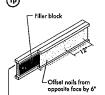
2015-04-16

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.







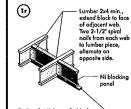


 Filler block is required between joists for full length of span. un ungan of span.

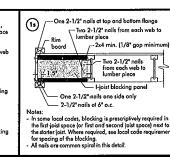
Noil joist logather with two rows of 3' noils of 12 inches oc. (clinched when passible) on each side of the double lipist. Total of four noils per foot required. If noils can be clinched, only two noils per foot are required. 5. The maximum factored load that may be applied to one side of the double joist using this detail is 860 lbf/ft. Verify double 1-joist capacity.

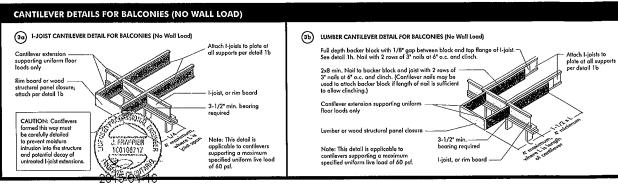
Vall sheathing,

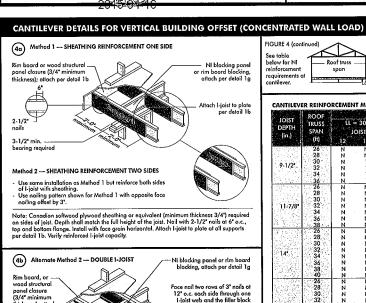
FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION Support back of I-joist web during nailing to prevent damage to web/flange connection. Flange Joist Size Depth Filler Block Size Leave a 1/8 to 1/4-inch gap between top of filler block and bottom of top I-joist 9.1/2" 11.7/8" 14" 16" 9-1/2° 11-7/8° 14° 16° 3' x 6' 3' x 8' 3' x 10' 3' x 12' 3-1/2"× 11-7/8" 2" 14" 16"



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.







Block Ljoists together with filler blocks for the full length of the reinforcement.

For Ljoist flonge widths greater than 3 inches place on additional row of 3" noils along the centrelline of the reinforcing panel from each side. Clinch when possible.

Attach I-loists to top plate at

all supports per detail 1b, 3-1/2*

Roof trusses 13-0* meximum
Girder Roof truss Jack trusses
truss 22-0* Roof truss -7 2'-0"

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

	ROOF							(UNFAC					
TRIOL	TRUSS	il =	30 psf,	DL = 15	psf	LL e	= 40 psf,	DL = 15	psf i	LL.	= 50 psf,	DL = 15	psf
DEPTH	SPAN	J(DIST SPA	CING (in)	J	OIST SPA	CING (in.		To the last	DIST SPA	CING (in	
(in.)	(ft)	12	16	19.2	24	12	16	19.2	24	12	16	19.2	24
فللحصم	26	N	N	1	2	N	1	7	X	N	2	X	X
	28	N	N	i	x	. N	i	. 2	X	N	2	X	Х
	30	N	1	1	х	N	1	2	Х	1	2	Х	Х
9-1/2	32	N	1	2	X	N	2	X	Х	1	Х	X	х
	34	N	1	2	X	N ·	2	Χ -	Х	1	Х	Х	Х
1.172	36	N	_1	2	X	. 1	2	Х	Х	1	X	X	<u>X</u>
Mark St.	26	N	N	N	!	N	N	1	2	N	Ņ	ļ	2
11,94,83	28 30	N	N	N	!	N	N	!	2	N N		ļ	٥
1 1 7 101	30	N N	N N	Ņ	- !	N N	N N		2	N	- 1	2	Ŷ
11-7/8	34	N	N	- ;	;	l N	17	- ;	Ý	N	i	2	Ŷ
	36	N	N:	i	2	l N	- ;	;	Ŷ	Ñ	- 1	2	x
1.00	38	Ň	N	i	2	Ϊ́	i '	2	- x	. N	ż	x	x
5000	26	Ñ	N	- N	N	N	N	N.	ï	N	N	N	1
1.0	28	N	N	N	N	N	N	N	1	N	N	1	1
	30	N	- N	N	N	N	N	N	1	N	N	1 :	2
14"	32	N	N	N	1	N	N	N	1	N	N	į.	2
	34	N	N	N	1	N	N	1	1	N	Ņ	!	. 2
7	36	N	N	N	1	N	N	!	2	N	1	!	2
	38	N	N	N	1	N	· N	!	. 2	N	-	1	Š
100	40 26	N N	N N	N	- N	N N	N N	- <u>1</u>	N	N N	-	N	^
	28	N	N	N	N	1 n	Ñ	N	ï	N	N.	Ä	i
3000	30	N	N	N	N	N N	N	Ň	i	N	N	Ñ	i
	32	N.	N	N	Ñ	l N	. N	Ñ	i	N	N	i	i
16*	34	N	N	N	N	N	N	N	i	N	N	1	2
经经验	36	N	N	N	1	N	N	N	1	N	N	1	2
12.51	38	N	N	N	3	N	N	N	1.	N	N	1	2
	40	N	Ŋ	N	1	Ŋ	N	!	2	- N	Ņ	ļ	2 X
3 X X	42	Ñ	N	N	1	N	N.	1	Ž	N			x

- 1. N = No reinforcement required.
 1 = NI reinforced with 3/4" wood structural panel on one side only.
 2 = NI reinforced with 3/4" wood structural panel on one side only.
 3 = NI reinforced with 3/4" wood structural panel on both sides, or double 1-joist.
 X = Try a deeper joist or closer specing.
 2. Moximum design load shall be: 15 psf roof.

___ Roof truss ___

span

- dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3'-0'

Roof trusses 13'-0" maxin
Girder Roof truss Jack trusses
truss 2'-0"

span

- For larger openings, or multiple 3°.0° width openings spaced less than 6°.0° o.c., additional joints beneath the openings cripple studs may be required.

 Total applies to joint 12° to 24° o.c. that is a special point of the property of th
- 4. For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivolent to the distance between the supporting well and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivolent to the distance between the supporting walls as if a

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

truss is used.

5. Cantilevered joists supporting girder trusses or roof beams may require additional reinforcing.

BRICK CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD) below for NI Provide full death blocking between oists over support (not shown) ----Nail reinforcement to to and bottom joist flange with 2-1/2" nails at 6" 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. Notil with 2-1/2' noils at 6' o.c., top and bottom flange. Install with face grain horizantal. Attach I-joist to plate at all supports per detail 1b. Verify reinforced I-joist capacity. o.c. (offset opposite face nailing by 3" when using reinforcement on both sides of I-joist) 3-1/2* min. 201204 (5b) SET-BACK DETAIL Rim board or wood -----structural panel closure (3/4" minimum thickness Provide full depth blocking Provide full depth blocking between joists over support (not shown for clarity) Allach I-joist to plate at all supports per detail 1b. 3-1/2" minimum I-joist bearing required. (5c) SET-BACK CONNECTION --- Hanger may be used in lieu of solid sawn block Notes: - Verify girder joist capacity if the back span exceeds the joist spacing. - Attach double 1-joist per detail 1p, if required.

BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED 11 = 40 psf. DL = 15 psf LL = 50 psf, DL = 15 psf LL = 30 psf, DL = 15 psf JOIST SPACING (in.) JOIST SPACING (in.) 16 19.2 24 16 19.2 24 16 19.2 24 9-1/2 11-7/8

N = No reinforcement required.
 N = NI reinforced with 3/4" wood structural.

1 = Ni reinforced with 3/4" wood structural panel on one side only.
2 = Ni reinforced with 3/4" wood structural panel on both sides, or double Lipist.
X = Try a desper joint or closer spacing.
2. Maximum design lood shall be 1.5 pst root dead lood, 5.5 pst floor stold lood, and 80 pst wall tood. Woll lood is based on 3.0" maximum width window or door openings.

WEB HOLES

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

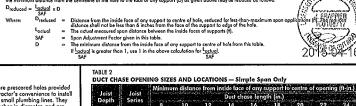
- The distance between the inside edge of the support and the centreline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
- 2. I joist top and bottom flanges must NEVER be cut, notched, or otherwise modified 3. Whenever possible, field-cut holes should be centred on the middle of the web.
- . The maximum size hole or the maximum depth of a duct chase opening that con 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.
- 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.
- us a or ine animeter or the maximum round hade permitted at final location.

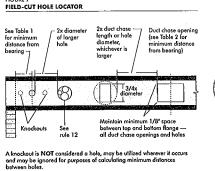
 Where more than one hade is necessary, the distance between adjacent hole adges shall exceed twice the diameter of the largest round have or twice the size of the largest square hade for twice the length of the largest square hade for twice the length of the largest state of the ingest reclaiming than of the company and each hade and duct chase opening and each hade and duct chase opening shall be sized and located in compliance with the requirements of labest 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 anywhere in a contilevered section of a joist. Holes of greater size may be permitted subject to
- 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.
- 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
- 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.

TABLE 1
LOCATION OF CIRCULAR HOLES IN JOIST WEBS
Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf 18-2* 19-2* 19-5* 19-9*

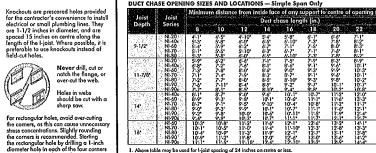
Above table may be used for t-joist spacing of 24 inches on centre or less.
 Hole localion distance is measured from inside face of supports to centre of hole.
 Distances in this chart are based on uniformly loaded joists.

The above table is based on the 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:





For reclangular holes, avoid over-culling the comers, at this can cause unnecessor areas concentrations. Slightly rounding the comers is recommended. Starting the reclangular hale by drilling a 1-inch diameter hole in each of the four corners and than making the cuts beauting the cuts the cuts of th



Above table may be used for 1-joint spacing of 24 inches on centre or less.
 Oud thate opening location distance is measured from inside face of supports to centre of opening.
 The above table is based on simple-tops noist into the 7 for other opplications, contact your local distributor.
 Distances are based on uniformly loaded floor joints that meet the span requirements for a design live load of 40 psf and deed load of 15 pst, and a live load defleted in limit to U.400. For other opplications, contact your local distributor.

INSTALLING THE GLUED FLOOR SYSTEM

- 1. Wipe any mud, dirt, water, or ice from 1-joist flanges before gluing.
- Snop 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
- Loy the first panel with tangue side to the wall, and nail 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 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 1-joists where panel ends butt to assure proper gluing of each end.
- 7. After the first row of ponels is in place, spread glue in the groove of one or two panels at a lime before loying the next row. Glue line may be continuous or spaced, but avoid squeeze-out by applying a thinner line (1/28 inch) than used an I-joil flanges.
- 8. Tap the second row of panels into place, using a block to protect groove edges
- 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
- 10. Complete all nailing of each panel before give sets. Check the manufacturer's recommendations for cure time. (Worm weather accelerates give 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 panels 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 give bond.

PASTENERS FOR SHEATHING AND SUBFLOORING(1)

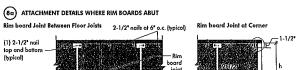
Maximum	Minimum	N	ail Size and Typ	ie .	Maximu	n Spacing
Joist Spacing (in.)	Panel Thickness (in.)	Common Wire or Spiral Nails	Ring Thread Nails or Screws	Staples	of Fa Edges	Interm. Supports
16	5/8	2*	1-3/4*	2'	6"	12'
20	5/8	2*	1-3/4"	2'	6"	12"
24	3/4	2"	1-3/4*	2'	6'	12*

- 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
- 3. Flooring screws shall not be less than 1/8-inch in diameter
- 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 manufacture's recommendations: If OSB panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with

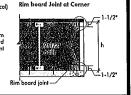
Ref.: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

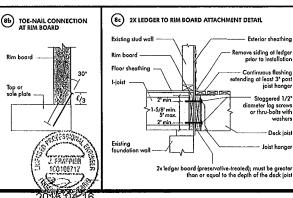
IMPORTANT NOTE:

Introduction Notes in the field glued to the t-joist flanges in order to achieve the maximum spans shown in this document. If shealthing is noticed only, 1-joist spans-must be verified with your local distributor.

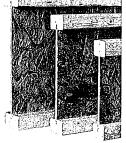


RIM BOARD INSTALLATION DETAILS











FSC mortissey C* C\$11517

2400f MSR 2100f ASR S-P-F No.2 1950FAISR 2100f MSR 1950f MSR NPG Lumber 33 pieces 23 pieces 23 pieces 23 pieces 23 pieces 33 pieces par unit per unit

Refer to the installation Guide for Residential Floors for additional information. CCMC EVALUATION REPORT 13032-R

WEB HOLE SPECIFICATIONS

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

- 1. 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 Table 1 or 2, respectively.
- Figist top and bottom fonges must NEVER be cut, notched, or otherwise modified.
 Whenever possible, field-cut holes should be centred on the middle of the web.
- 4. The maximum size halo or the maximum death of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flo of the Ligist 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.

LOCATION OF CIRCULAR HOLES IN JOIST WEBS

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

2'-10" 4'-3" 5'-8" 6'-0" 3'-0" 4'-4" 6'-0" 6'-4" 4'-0" 5'-4" 7'-0" 7'-5" 4'-9" 6'-3" 8'-0" 8'-4"

Minimum Distance from Inside Face of Any Support to Centre of Hale (ft - in.) Round Hole Diameter (in.)

Above table may be used for I-joist spacing of 24 inches on centre or less.
 Hole location distance is measured from inside face of supports to centre of hole.
 Sistences in this chart are based on uniformly loaded joists.
 The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for sharter spans; cantact your local distributor.

6 6-1/4 7 8 8-5/8 9 10 10-3/4 11 12 12-3/4

- 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 largest rectangular hole are duct chose opening) and each hole and duct chose 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
- 8. Holes measuring 1-1/2 inches or smaller are permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification
- ignored for purposes of calculating minimum distances between holes and/or duct
- 11. Limit three maximum size hales per span, of which one may be a dust chose opening.

 12. A group of round holes at approximately the same location

Ilustrated in Figure 7.

9. A 1-1/2 inch hole ar 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

shall be permitted if they most the requirements for a single round hale circumscribed around them.

DUCT CHASE OPENING SIZES AND LOCATIONS

Simple Span Only

4.1	1.7.4	Minim	ım distan	ce from in	side face	of suppo	nts to ce	ntre of c	pening (A - in.}
Joist Depth	Joist Series				Duct Che	aso Long	th (in.)			
Dopin	00,,00	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°
	NI-40x	5'-3'	5-8'	6'-0'	6'-5"	6'-10"	7-31	7'-8'	8'-2'	8'-6"
9-1/2"	NI-60	5'-4'	5'-9'	5'-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
	NI-80	5'-3'	5'-8'	6'-0'	6'-5"	6'-10'	7'-3"	7'-8'	8'-2"	8'-6"
	NI-20	5'-9'	61-21	5'-6'	7'-1"	7'5"	7.9	8.3,	8'-9"	9.4
	NI-40x	6'-8'	7'-2"	7-6	B'-1"	8'-6"	9-1	9.6	10-1	10-9"
	NI-60	713"	7-8	8'-0"	B'-6"	5r0.	9-3	9'-9'	10'-3"	11'-0"
11-7/8°	NI-70	7-1"	71-4"	7-9"	8,-3,	8'-7"	9'-1"	9'-6"	10'-1"	10'-4"
	NI-BO	7'-2'	7'-7"	8-0	8'-5"	8'-10"	9'-3'	9-8	10'-2"	10'-8"
	NI-90	71-61	74111	8'-4"	8'-9"	9'-2"	9-7	10-7	10-7	10-11
	NI-90x	7:-7'	81-12	8'-5"	8'-10'	9-4*	9'-8"	10'-2"	10'-8"	111.21
	NI-40x	8'-1'	81.71	ðr0.	9'-6"	10-1°	10.7	1112	12'-0"	12'-8"
	NI-60	8'-9'	9'-3"	9.8	10'-1'	10-6"	11:15	11'-6"	13'-3' 11'-7'	13'-0' 12'-3'
14"	NI-70	8.7	9'-1"	9'-9'	9'-10' 10'-1'	10'-4" 10'-7"	10'-8"	11'-2" 11'-6"	12-1	12-6
• •	NI-80	9'-0'	9-3	10-0	10-6	10-11		111-91	12'-4'	12-11
	NI-90	9.4	3.9	10-3*	10-2	114	11.7	1241	12-7	13-2
	NI-90x	10-3"	10/-8"	1142*	11.6	12-1"	12-6	131-2"	14'-1'	14'-10"
	NI-60 NI-70	10-1	10'-5"	11'-0"	11-4"	11-10		12'-8"	13'-3"	14.0
16	NI-80	10-4	10-5	11-3	11-9	12-1*	12-7	13-1"	13-8	1444
10	NI-90	10-5	111-2"	1148"	12.0	12-6"	13-0	13.6	14-2	14-10
	NI-90x	17-1"	111-5"	11-10		12-10		13'-9"	14.4	15-2
	14143.01	1 1 1 - 1	(, -5	11-10	12-7	12-10	10-2	10.7		10-2

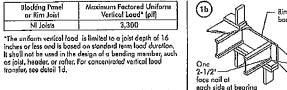
Joist	loist	MALTERIA	m dision	ce trom in				11110 01 5	than such t	11 - 1/1.7
Depth	Series				Dud Ch	aso Long	th (in.)			
Depin	361162	8	10	12	14	16	18	20	22	24
	NI-20	4'-1"	45'	4-10"	5-4"	5'-8"	6'-1"	6'-6'	7-1"	7'-5°
	NI-40x	5'-3'	5'-8'	6'-0"	6'-5"	6'-10"	7-31	7'-8'	8-2	8'-6"
9-1/2"	NI-60	5'-4'	5'-9'	5'-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"
	NI-80	5'-3'	5'-8'	6'-0"	6'-5"	6'-10"	7'-3"	7'-8'	8'-2"	8'-6"
	NI-20	5'-9'	61-21	5'-6'	7'-1"	7-5	7'-9'	8.3,	8'-9"	9-4
	NI-40x	6'-8'	7'-2"	7'-6'	B'-1"	8'-6"	9'-1"	96	10:1"	10-9"
	NI-60	71-31	748*	8'-0"	B'-6"	910	9-3	9:-9:	10'-3"	11'-0"
11-7/8°	NI-70	7-1"	71.4"	7'-9"	8, 3,	8'-7"	9-1-	9'-6"	10'-1"	10'-4"
	NI-BO	71.21	7'-7"	8,-0,	8'-5"	8'-10"	9-3	9-8	10'-2"	10'-8"
	NI-90	7.61	74111	8-4	8'-9"	9-2	91-7	10-1	10-7	10.11
	NI-90x	7:-7	8'-1"	8'-5"	8-10	9-4	9'-8"	10'-2"	10'-8"	11-2
	NI-40x	8'-1'	81.71	5'-0"	9'-6"	10-10	10-7	111-2"	12'-0"	12-5
	NI-60	8'-9'	9'-3"	9.8	10'-1"	10-6"	11:1"	11'-6"	13'-3"	13-0
14"	NI-70	84.71	9'-1"	9'-5"	9'-10'	10'-4"	10-8	11:2	11'-7"	12'-3"
1 14	NI-80	9'-0'	Q-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	9-91	10'-3*	10:-7'	11-1"	11-7	1241	12'-7'	13'-2'
1	NI-60	10-3"	10'-8"	11-2*	11-6	12-1"	12-6	13'-2"	14'-1"	14-10
ļ	N-70	10'-1"	10'-5"	11'-0"	11.4	11-10		12'-8"	13'-3"	14.0
16*	N4-80	10-4	10-9"	11'-3"	11-9	12'-1"	12-7	13'-1"	13'-8"	1444
1	NI-90	10-9	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14-2	14-10
1	NI-90x	1343"	11'-5"	11-10	12-4	12-10	13-2	13'-9"	1444	15'-2"

- Above table may be used for I-joist specing 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 faced distributor.
 Distances are based on uniformly loaded floor joists that meet the span requirements for a design five load of 40 pst and dead load of 15 pst, and a live load defection limit of LV480.
 The above table is based on the I-joists being used of their maximum spans. The minimum distance os given above may be reduced for shorter spans; contact your local distributor.

Attach I-joist to top plate per detail 1b

Blocking Panel or Rim Joist Vertical Load* (plf) 3,300 The uniform vertical load is limited to a joist depth of 16

2-1/2' nails at 6° o.c. to top plate (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking)



Double I-joist header

NOTE: Unless hange

sides laterally support

or Rim Joist

1-1/8" Rim Board Plus

each side at bearing

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

Maximum Factored Uniform Vertical Load* (plf)

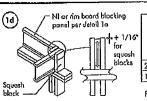
8.090

ATha 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 folist, header, or rafter, For concentrated vertical load transfer, see detail 1d.

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

One 2-1/2' wire or spirel noil at top and bottom flange

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



NI blocking

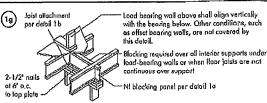
Maximum Factored Vertical Load per Pair of Squash Blacks (lbs Pair of Squash 3-1/2" wide 5,500 8,500 1-1/8' Rim Board Flus 4,300 6,600

Provide lateral bracing per detail 1 a or 1 b



Top- or face-mount

Fransfer load bearing below blocks per detail 1d. Match bearing area of blocks below to post



Backer block (use if hunger load exceeds 360 lbs). Before installing a backer block to a double I-joist, drive three additional 3° noils through the was and filler block where the backer block will fit. Clinch, Install backer tight to too flange. Use traile 3' nails, clinched then possible. Maximum factored resistance for hanger for this detail = 1,620 lbs.

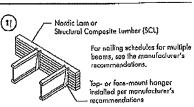
BACKER BLOCKS (Blacks must be long enough to permit required nailing without splitting) The Miles | Martin Thickness Required | Minimum Danthes

Lightle sydin	Winterior Linewiness and all por	minimon papa
2-1/2*	1,	5-1/2*
3-1/2*	1-1/2"	7-1/4*
	(()	ENL O . b.u. l bl.

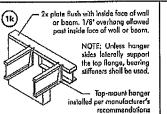
- Minimum grade for backer black material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-O437 Standard.
- For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges For 2" thick flanges use not depth minus 4-1/4".

the top flange, bearing Backer block required (both sides for face

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



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

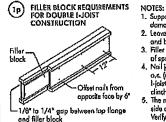


m black shawn, Nordic Lam or SCI, headers may also be used. Verify double 1-joist Socker block attached per detail 1 h. Nail with twelve 3 nails, clinch when possible. → insiali hanger per manufaciorer's capacity = 1,620 lbs.

Multiple I-joist header with full depth filler



Lumber 2x4 min., extend block to face of adjacent web. Two 2-1/2' spirol nails rom each web to lumber piece, alternate on apposite side. OPTIONAL: Minimum 1x4 inch strap applied to underside of joist at blocking line or 1/2 inch minimum sypsum ceiling attached to underside of joists.



1. Support back of l-joist web during nailing to prevent damage to web/flange connection.

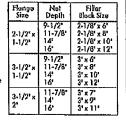
2. Leave a 1/8 to 1/4-inch gap between top of filler block and bottom of top 1-joist flange.

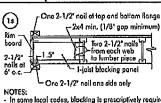
3. Filler block is required between joists for full length

4. Nail joists together with two raws of 3' noils of 12 inches o.c. (clinched when possible) on each side of the double L-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 lbt/ft. Verify double 1-joist capacity.





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 blacking.

All nails are common spiral in this detail.

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.

All nails shown in the above details

are assumed to be

on wire nails

FIGURE 7

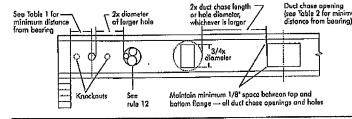
Depth

9-1/2"

11-7/8

14"

FIELD-CUT HOLE LOCATOR





Knockouls 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 spaced 15 inches on centre along the length of the 1-joist. Where possible, it is preferable to use knockouls instead of field-cut holes.

Never drill, cut or noich the flance, or over-cut the web.

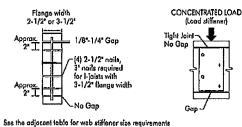
Holes in webs should be cut with a sharp saw.

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 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.

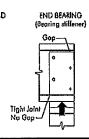
WEB STIFFENERS

RECOMMENDATIONS:

- A boaring stiffenor 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 siffener is required when the I-loist is supported in a hanger and the sides of the hanger do not extend up to, and support, the lop flange. The gap between the stiffener and flange is at the tap.
- A load siffener is required at locations where a factored concentrated load greater than 2,376 lbs is applied to the top floring between supports, or in the case of a contilever, onlywhere between the contilever tip and the suppoil. These volues are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gop between the stillners and the floring is at the bottom.



WEB STIFFENER INSTALLATION DETAILS



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

SAFETY AND CONSTRUCTION PRECAUTIONS



Do not walk on t-joists until fully fastened and braced, or



Never stock building materials over unsheathed Fjoists. Once sheathed, do not over-stress

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

AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

- Braca and nail each Lipist as it is installed, using hangers, blacking panels, rim board, und/or cross-bridging at joist ends.
 When Lipists are applied confinuous over Interior supports and a load-bearing wall is planned at that focation, blocking will be required at the interior support. ce required at the interior support.

 2. When the building is completed, the floor sheathing will provide lateral support for the top flanges of the t-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 centre, and must be secured with a minimum of two 2-1/2" noils fastened to the top surface of each 1-joist. Noil the bracing to a lateral restraint at the end of each box, Lop ands of adjoining bracing over at feast two 1-joists.

 **Or, sheathing (temporary or permanent) can be noiled to the top flange of the first 4 feet of 1-joists at the end of the box.

 **For confidenced 1-joists, brace top and battom flanges, and brace ends with closure panels, rim board, or cross-bridging.

 **Linstall and fully noil permanent sheathing to each 1-joist before placing loads on the floor system. Then, stack building
- 5 Never install a damaged Lipist.

Improper storage or installation, failure to follow applicable building codes, failure to follow span rollings for Nordic Lijoists, failure to follow allowable hole staps and locations, or failure to use web stiffeners when required can result in serious occidents. Follow these installation guidelines carefully:

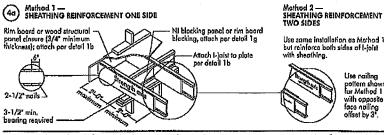


PRODUCT WARRANTY

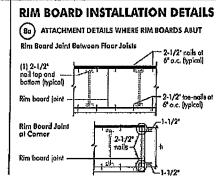
Chansiers Chibongaman guarantees that, in accordance with our specifications, Nordic products are free from manufacturing defects in material and workmanship.

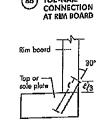
Furthermore, Chantiers Chibougaman warrants that our produces, hen utilized in accordance with our handling and installation instructions will meet or exceed our specifications for the lifetime of the structure.

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET



NOTE: Canadian softwood plywood shealthing 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 1-joist to plate at all supports per detail 1b. Verify reinforced 1-joist copacity.





8b TOE-NAIL



PASSED

January 29, 2019 15:52:18

Wind

Tributary

00-00-00 n\a n\a n\a n\a

n\a

1ST FLOOR FRAMING\Flush Beams\B1(f3738)

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports

Dry | 1 span | No cant.

File name:

TH9C LOT1 SUNKEN.mmdl

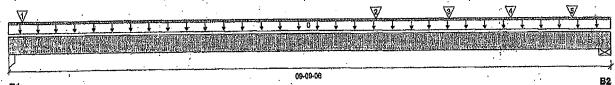
Wind

Description:

1ST FLOOR FRAMING\Flush Beams\B1(I3738)

Specifier: Designer:

Company:



B1

Total Horizontal Product Length = 09-09-06

Reaction	Summary (Down I	/ Uplift) (lbs)	•
Bearing		Dead	Snow
B1, 5-1/4"	Live 778 / 0	508/0	
B2, 4-3/8"	508 / 0	283/0	

CCMC 12472-R

100	ad Summary						LIVO	Çezd	Snow	AAIUG	1
Tag		Load Type	Ref.	Start	End	Loç,	1.00	0.66	1.00	1.15	
-100	Self-Weight	Unf, Lin. (lb/ft)	Ļ.	00-00-00	09-09-06	Top		5			Q
1	E2(11665)	Conc. Pt. (lbs)	L.	00-02-12	00-02-12	Top	547	365	-		
'n	:	Conc. Pt. (lbs)	L	05-11-10	05-11-10	Top	510	264		•	
à	J5(138O3).	Cong. Pt. (lbs)	Ł	07-02-00	07-02-00	Top	80	40			•
γ.	J5(13705)	Conc. Pt. (lbs)	Ĺ.	08-02-00	08-02-00	Top	.80	40	أظاوم وسنتشيخ	***	
Ξ.	J5(13707)	Conc. Pt. (lbs)	Ĺ	09-02-00	09-02-00	Top	69	34 🖋	OHO.	ESS'ON	S. Same
ð	20/101011	Condit is (inc)	- .	:					S Tarren	- Parkerskie	k]

Controls Summary	Factored Demand	Factored Resistance	Demand/ Rosistance	Case	Location
Pos. Moment	2,816 ft-lbs	7,533 ft-lbs	37.4%	1	05-11-06
End Shear	1,009 lbs	5,785 lbs	17.4%	1	08-07-08
Total Load Deflection	L/999 (0,097")	n\a	n\a	4	05-02-08
Live Load Deflection	L/999 (0.062")	n\a	n\a	5	05-02-08
Max Defl.	0,097"	n\a	n\a	4	05-02-08
Span / Depth	11.5	•			•

Regring	Supports	Dim. (LxW)	Demand	Demandi Resistance Support	Demand/ Resistance Member	Matorial	
<u> </u>	Column	5-1/4" x 1-3/4"	1,801 lbs	24.1%	16.1%	Unspecified	
B2	Wall/Plate	4-3/8" x 1-3/4"	1,116 lbs	27.3%	11.9%	Unspecified	

Notes

Design meets Code minimum (L/240) Total load deflection criteria. Design meets Code minimum (L/360) Live load deflection criteria. Calculations assume unbraced length of Top: 05-05-00, Bottom: 05-05-00, CONFORMS TO 0BC 2012 Resistance Factor phi has been applied to all presented results per CSA Q86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA Q86. Design based on Dry Service Condition.

importance Factor: Normal Part code: Part 9

Disclosure

Use of the Bolse Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of Input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accented design building code-accepted design properties and analysis methods. Installation of Bolse Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation,

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, "VERSA-LAM®, VERSA-RIM PLUS®,

DWW NO. TAM2292-1944 STRUCTURAL COMPONENT ONLY

T-1902866



PASSED

1ST FLOOR FRAMING\Flush Beams\B16(I3765)

Dry | 1 span | No cant

January 29, 2019 15:52:18

BC CALC® Member Report Bulld 6475

Job name:

B1

Address:

City, Province, Postal Code: Customer:

ST ...NES

File name:

TH9C LOT1 SUNKEN.mmdl

Wind

Description:

1ST FLOOR FRAMING\Flush Beams\B16(i3765)

Specifier: Designer: Company:

CCMC 12472-R Code reports:

11-10-10 Total Horizontal Product Length = 11-10-10

Snow

Reaction Summary (Down / Uplift) (lbs)

193/0 B1, 2 312/0 566 / 0 B2, 2-5/8"

Load Summary	l and Trees	Ref.	Start	End :	Loc.	Live 1.00	Dead 0,65	\$now 1.00	Wind 1,16	Tributary
Tag Description 0 Self-Weight 1 FC3 Floor Material	Unf. Lin. (lb/ft) Unf. Lin. (lb/ft)	Ţ.	00-00-00 00-00-00	11-10-10 11-10-10	Top Top	40	5 20			00-00-00 n\a
2 STAIR Controls Summary	Unf. Lin. (lb/ft) Factored Demand	Factored Resistance	07-04-14 Dema	10-10-14 and/ stance	Top	120	60 PAC) FE8810	W.A.	n\a ·
Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl.	2,883 ft-lbs 1,146 lbs L/724 (0.193") L/999 (0.123") 0.193"	11,610 ft-lbs 6,786 lbs n\a n\a n\a	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TRANSPORT OF THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	% %	1 1 4 5 4	07-07-08 10-10-08 06-02-06 06-02-06	E	CBU FO	K ?	NESS

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	· Case	Location
Pos. Moment	2,883 ft-lbs	11,610 ft-lbs	24.8%	1	07-07-08
End Shear	1.146 lbs	6,785 lbs	19.8%	1	10-10-08 🛭
Total Load Deflection	L/724 (0.193")	n\a	33.1%	4	06-02-06
Live Load Deflection	L/999 (0.123")	n\a	n\a	5	06-02-06
Max Defi.	0.193"	n\a	n\a	4	06-02-06
Span / Depth	14.7				

	•			Demandi Resistance	Demand/ Resistance	
Bearing S	upports	Dlm. (LxW)	Demand	Support	Member	Material
Assessment of the latest and the lat	anger	2" x 1-3/4"	736 lbs	n\a	17.2%	HUS1.81/10
Po P	eam	2-5/8" x 1-3/4"	1.238 lbs	50.5%	22.1%	Unspecified

B1 **B**2

Header for the hanger HUS1.81/10 at B1 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

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.

CONFORMS TO OBG 2012 Hanger Manufacturer. Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Disclosure

Use of the Bolse Cascade Software Is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods, installation of Bolse Cascade Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

DW8 HU. TAN 2293-1911 STRUCTURAL COMPONENT ONLY





PASSED

1ST FLOOR FRAMING\Flush Beams\B2(13748)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report **Build 6475**

Job name:

Address: City, Province, Postal Code: ST ... NES

Customer: Code reports: **CCMC 12472-R**

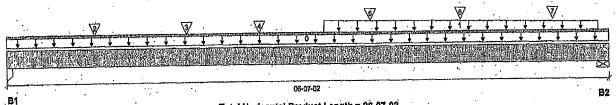
File name:

TH9C LOT1 SUNKEN.mmdl

Description: 1ST FLOOR FRAMING\Flush Beama\B2(I3748)

Specifier: Designer:

Company:



Total Horizontal Product Longth = 08-07-02

•		* * * * * * * * * * * * * * * * * * *				• •
Reaction Summary	(Down / Uplift)	(lbs)	••		•	
Bearing	Live	Dead	Snow V	<u> Vind</u>	*************	
B1, 1-3/4"	1,067 / 0	586 / 0	•			
B2, 4-3/8"	1,212/0	656 / 0		,		

	Land Commonwell		•				Live	neso	Show	AAIUC	trinetary
	Load Summary Tag Description	Load Type	Rof.	Start	End	Loc.	1.00	0.86	1.00	1.15	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
٠,	0 Self-Weight	· Unf. Lln, (lb/ft)	4	00-00-00	06-07-02	Top		10			00-00-00
	1 Smoothed Load	Trapezoldal (lb/ft	Ĺ	03-05-12		Top	280	140			n\a
	1 Sudoniso roso	Trapozotaci (aris			06-05-12		202	101			
	n (0//07/64)	Conc. Pt. (lbs)	1.	00-11-12	00-11-12	Top	262	131			n\a
	2. J2(13761)	Conc. Pt. (lbs)		01-11-12	01-11-12	Top	217 .	109	,		n\a
	3 J2(13790)	Conc. Pt. (lbs)	1	02-09-04	02-09-04	Top	842	458	" توسورون	we then	, n\a
	4	Conc. Pt. (lbs)	1	03-11-12			80	40 aug	PROPES	S'ON	Ma 11/8
	5 J5(13803)		ı	04-11-12	04-11-12	Top	- 80	40.9	A STANSON OF THE PERSON NAMED IN	192000m 4 15	nla
	6 J5(13705)	Conc. Pt. (lbs)	1	05-11-12	05-11-12		66	38	ALTER (211 PR	nla
	7 J5(\3707)	.Conc. Pt. (lbs)	i.		00-11-14	iob		IE C	Secretary Land	COLUMN TO SERVICE	. 2
	•	. •	Factored	Dem	and/			lě	E 6	FOK	81.
	Controls Summary		Resistance		stance	Case	Location		fun.	١	
	The state of the s		22 220 6-8	20.0	10%	1	02-09-02	1 " /	The second of the least	Star o was leaved	7 j

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	4.843 ft-lbs	23,220 ft-lbs	20.9%	1	02-09-02
End Shear	2:321 lbs	11,571 lbs	20.1%	1	00-11-04
Total Load Deflection	L/999 (0.044")	n\a	n\a	4	03-02-00
Live Load Deflection	L/999 (0.029")	n\a	n\a	5	03-02-00
Max Defl.	0.044"	n\a	n\a	4	03-02-00
Span / Depth	7.8		•		

Bearing S	upports	Dlm. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 0	olumn	Dlm. (LxW) 1-3/4" x 3-1/2" 4-3/8" x 3-1/2"	2,333 lbs 2,638 lbs	46.9% 32.3%	31,2% 14.1%	Unspecified Unspecified

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

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

Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.

CONFORMS TO OBC 2012

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA Q86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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.

> DWG NO. TAM 22 94 1 STRUGTURAL COMPONENT ONLY

T-190268





PASSED

1ST FLOOR FRAMING\Flush Beams\B2(i3748)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Bulld 6475

Job name: Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

File name:

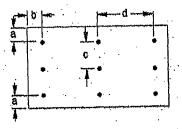
TH9C LOT1 SUNKEN.mmdl

1ST FLOOR FRAMING\Flush Beams\B2(i3748) Description:

Specifier:

Designer: Company:

Connection Diagram: Full Length of Member



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

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: Nalls

ARDOX SPIRAL



Disclosure

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Completeness and accuracy of input
must be reviewed and yerified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Bolse Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®

STRUCTURAL COMPONENT ONLY

T-1902686)

DWEND. TANZISY-18H





PASSED

Tributary

00-00-00 n\a n\a n\a n\a

1ST FLOOR FRAMING\Flush Beams\B3(I3745)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Bulld 6475

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

File name:

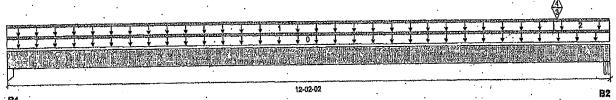
TH9C LOT1 SUNKEN.mmdl

Description: 1ST FLOOR FRAMING\Fiush Beams\B3(i3745)

Wind

Specifier: Designer:

Company:



Total Horizontal Product Length = 12-02-02

Snow

Reaction Sun	ımary (Down / Up	lift) (lbs)
Bearing	Live	Dead
Bearing B1, 3-1/2"	141/0	107.70
DO 0.5/88	17619	208 / 0

I and Commonst			•			Live	Dead	Snow	Wind
Load Summary Tag Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15
0 · Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-02-02	Top		5		;
1 FC3 Floor Material	Unf, Lin. (lb/ft)	L	00-00-00	11-00-10	Top	23	11		
2 FC3 Floor Material	Unf. Lin. (lb/ft)	L·	11-00-10	12-02-02	Top	24	12		٠.
3 B4(13736)	Conc. Pt. (lbs)	Ē.	11-01-08	11-01-08	COT	41 .	119	, ,,	w
- , , , , , , , , , , , , , , , , , , ,	Conc. Pt. (lbs)	ī	11-01-08	11-01-08	Top	-2		PROF	
4 B4(13736)	Cond. Fr. (IDS)	-	11-01-00	11.01.00	٠٠,	•		ALL BUILD	

Controls Summary	Factored Demand	Factored Resistance	Demand/ Registance	Case	Location
Pos. Moment	1,033 ft-lbs	11,610 ft-lbs	8.9%	1	06-04-09
End Shear	466 lbs	5.785 lbs	8.1%	1	11-02-00
Total Load Deflection	1/999 (0.076")	n\a	n\a	6	06-02-11
Live Load Deflection	L/999 (0.041")	n\a	n\a	8	06-02-11
Max Defi.	0.076"	n\a	n\a	6 .	08-02-11
Span / Depth	14.9		•		

Restina	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column	3-1/2" x 1-3/4"	346 lbs	Support 7,0%	4.6%	Unspecified
B2	Beam	2-5/8" x 1-3/4"	523 lbs	21.3%	9.3%	Unspecified

Notes

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

Design meets Code minimum (L/360) Live load deflection criteria. Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA Q86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and acquracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of sultability for a particular application. The output here is based on building code-accepted design properties and analysis methods. properties and analysis methods. installation of Bolse Cascade engineered wood products must be in accordance with current installation. Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 hosfore installation. before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

STRUCTURAL COMPONENT ONLY

CONFORMS TO DBG 2012





Single 1-3/4" x 9-1/2" VERSA-LAM® 2:0 3100 SP

PASSED

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License Agreement (EULA).
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must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to

ariyone relying on such output as evidence of suitability for a particular

properties and analysis methods. Installation of Bolse Cascade

application. The output here is based on building code-accepted design

engineered wood products must be in

accordance with current installation Guide and applicable building codes. To

obtain Installation Guide or ask

1ST FLOOR FRAMING\Flush Beams\B4(i3736)

Dry | 1 span | No cant. .

January 29, 2019 15:52:18

BC CALC® Member Report Build 6475

Job name: Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

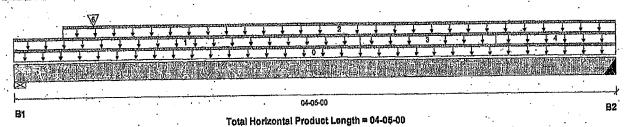
File name:

TH9C LOT1 SUNKEN.mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B4(I3736)

Specifier: Designer:

Company:



Snow

CCMC 12472-R

Reaction Summary (Down / Uplift) (lbs)

1,603/0 3,359/0 B1, 10' 42/0 135 / 0 B2, 2"

Load Summary	Land Book	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	8now 1.00	Wind 1.15	Tributary
Tag Description	Load Type		00-00-00	04-05-00	Тор		5	***************		00-00-00
0 Self-Weight	Ųnf. Lin. (lb/ft)				-		٠.٠			
1. FC3 Floor Mate	erial Unf. Lin. (lb/ft)	L	00-00-00	02-06-08	Top	23			:	n\a
2 WALL	Unf. Lin. (lb/ft)	L	00-04-08	04-05-00	Top		56			n\a
3 FC3 Floor Mate	****	L	02-06-08	03-06-08	Top	22 .				BRICA NIB
4 FC3 Floor Mate		L	03-06-08	04-05-00	Top	23	•		PHOFE	
5 -	Conc. Pt. (lbs)	· L	00-07-03	00-07-03	Тор	1,541	3,197	130	of the same	Scoles in the
	•	Factored	Den	and/			•	12	San San San	Kedenin Playan
Controls Summ	IATY Factored Demand	Resistance		stance	Case	Location :				FUK
Pos. Moment	158 ft-lbs	7,546 ft-lbs	2.19	%	. 0	02-06-08			Dobt #	· Constitution
1 ON MOUNT	407 the	2 761 lbe	΄ Λ Λ	%	n	01-07-08		₩.		M & ~

Pos. Moment	158 ft-lbs	7,546 ft-lbs	2.1%	0	02-06-08
•	167 lbs	3.761 lbs	4.4%	0	01-07-08
End Shear Total Load Deflection	L/999 (0.001")	n\a	n\a	4	02-06-08
Live Load Deflection	L/999 (0")	n\a	ท\ฮ	5	02-06-08
Max Defl.	0.001"	n/a	n\a	4	02-06-08
Span / Depth	4.5			•	

				Demand/ Resistance	Demand/ Resistance	
Bearing	Supports	Dlm. (LxW)	Demand	Support	Member	Material
B1	Wall/Plate	10" x 1-3/4"	4,702 lbs	77:4%	33,9%	Unspecified
B2	Hanger	2" x 1-3/4"	189 lbs	n\a	6.8%	HU\$1.81/10

Header for the hanger HUS1.81/10 at 82 is a Single 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

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.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

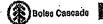
Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

questions, please call (800)232-0788 before installation. BC CALCO, BC FRAMER® , AJS™ ALLJOIST®, BC RIM BOARD™, BCI® BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

UWBHU. YAM 202618H STRUCTURAL COMPOSENT ONLY

T-1902570



PASSED

B2

1ST FLOOR FRAMING\Flush Beams\B5(i3795)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

Bulld 6475

Job name:

Address: City, Province, Postal Code: ST ... NES

BC CALC® Member Report

Customer:

Code reports:

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN, mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B5(i3795)

Wind

Specifier:

Designer:

Company:

			Control of the Cont	THE PERSON NAMED IN
more than the second		The state of the s		1
		matter and the property of the	to the first territory and the state of the	ng hisanaman kusing a
AND DESCRIPTION OF THE PROPERTY OF THE PROPERT		11 1 1 1 1 1 1	\$ \$ \$ \$ \	**_
THE PERSON NAMED IN THE PE	THE RESIDENCE OF THE PROPERTY	and the same of th	The part of the last of the la	The same of
	l) 	<u> </u>	<u> </u>
	Control of the Contro	NUMBER OF THE PERSON OF THE PE		
1. 大学、工程、工程、工程、工程、工程、工程、工程、工程、工程、工程、工程、工程、工程、	到1.6% (2.1%) [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%] [1.1%]	THE REPORT OF THE PROPERTY OF THE PARTY.	THE WAS SEEN BEST OF THE PROPERTY OF THE PERSON OF THE PER	11/10/20 July 1
The state of the s				
,	•			b
·			7,	
1	03-	8-10		Do.

Total Horizontal Product Length = 03-08-10

Snow

Reaction Summary (Down / Uplift) (lbs)

Lĺve Bearing 457 / 0 237 / 0 B1, 2 237 / 0 457 / 0 B2, 2"

•	.` 	De company to the f						Live	Dead	Snow	Wind	Tributary
		Summary scription	Load Type	Ref.	Start	End	Loc.	1,00	0.65	1.00	1.15.	· · ·
-		olf-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-08-10	Тор		5		, , ,	00-00-00
		AIR	Unf. Lin. (lb/ft)	L	00-00-00	03-08-10	Тор	, 240	120			n\a
		3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-08-10	Top	6	3		- •	n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	814 ft-bs	11,610 ft-lbs	7.0%	1	01-10-05
End Shear	476 lbs	5.785 lbs	8.2%	. 1	00-11-08
Total Load Deflection	L/999 (0.005")	n\a	n\a	4	01-10-05
Live Load Deflection	L/999 (0.003")	n\a	n\a	5 ·	01-10-05
Max Defl.	0.005"	n\a	n\a	4	01-10-05
Span / Depth	4.4		•		

Rearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demandi Resistance Member	Material	•
B1	Hanger	2" x 1-3/4"	983 lbs	n\a	23.0%	`HUS1.81/10	
B2	Hancer	2" x 1-3/4"	983 lbs	n\a	23.0%	HUS1.81/10	

Cautions

Header for the hanger HUS1.81/10 at B1.is a Single 1-3/4" x 9-1/2" VER\$A-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity. Header for the hanger HUS1.81/10 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

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.

Hanger Manufacturer: Unassigned

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 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PNOFESS.ON.

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DWB NO . TAM 2297-184 STRUGTURAL COMPONENT ONLY

CONFORMS TO DBC 2012



PASSED

1ST FLOOR FRAMING\Flush Beams\B6L(i2913)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer: Code reports:

B2, 3-1/2"

J2(13243)

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN.mmdl

Wind

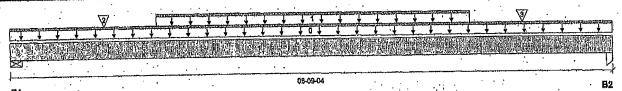
214

1ST FLOOR FRAMING\Flush Beams\B6L(i2913) Description:

Specifier:

Designer:

Company:



Total Horizontal Product Length = 05-09-04 Snow

Reaction Summary (Down / Uplift) (lbs) Dead 556/0 292/0 B1, 4-3/8

555/0

Snow Wind Tributary Dead Live **Load Summary** 0.65 1.15 1.00 End Start Load Type Tag Description
O Self-Weight 00-00-00 00-00-00 05-09-04 Top 5 Unf. Lin. (lb/ft) n\a 230 115 01-04-14 04-04-14 Top L Unf. Lin. (lb/ft) Smoothed Load n\a 207 103 Conc. Pt. (lbs) L 00-10-14 00-10-14 Top J2(13239) 2 107 n\a

04-10-14

Top

04-10-14

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1,729 ft-lbs	11,610 ft-lbs	14.9%	1	02-10-14
End Shear	1,064 lbs	5,785 lbs	18.4%	1	04-08-04
Total Load Deflection	L/999 (0.024")	n\a	n\a	4	02-10-14
	L/999 (0,016")	n\a	n\a	5	02-10-14
Live Load Deflection Max Defl	0.024"	· n\a	n\a	4	02-10-14
Span / Depth	6.6				,

291/0

Demand/ Demand/ Resistance Resistance Material Support Member **Bearing Supports** Demand Dim. (LxW) Unspecified 12.8% 1,199 lbs 29.3% 4-3/8" x 1-3/4 B1 Wall/Plate Unspecified 16.0% 3-1/2" x 1-3/4" 1,196 lbs 24.1% Column · B2

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

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

Calculations assume member is fully braced.

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

Conc. Pt. (lbs)

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA Q86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Con Kun ... The

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8 NO . TAN 22*98*-184 STRUGTURAL COMPONENT ONLY

CONFORMS TO DBC 2012

T-1902372



PASSED

2ND FLOOR FRAMING/Flush Beams/B10(i3232)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

Snow Wind

KANG KW

Dead

Tributary

BC CALC® Member Report

Bulld 6475

Job name:

Address: City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

Description:

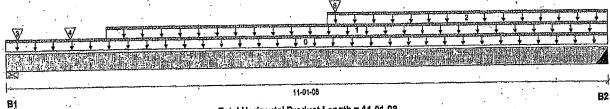
Specifier: Designer:

File name:

TH9C LOT1 SUNKEN.mmdl

2ND FLOOR FRAMING\Flush Beams\B10(i3232)

Company:



Total Horizontal Product Length = 11-01-08

Reaction Summary (Down / Uplift) (lbs)
Bearing Live Dead Wind Snow Bearing B1, 5-1/2 2,043 / 0 1,525 / 0 946/0 1,711/0 B2, 3"

ĻΦ	ad Summary				e	.1	1400	D 10.65	1,00	1.15	
Tag	Description	Load Type	Ref.	Start	End	Loc.	1.0	0. 0.00	**************************************		00-00
سينبه	Self-Weight	Unf. Lln. (lb/ft)	Ļ	00-00-00	11-01-08	Top		10		ÜÜ=Ü	10-00
	+ + · · · · · · · · · · · · · · · · · ·	Unf. Lin. (lb/ft)	· 1	01-10-10	11-01-08	Top	22	2 111		•	n\a
7	Smoothed Load		1		11-01-08	Top	7				n\a
2	FC4 Floor Material	Unf. Lin. (lb/ft)	Ļ.,	05-11-08			•	4.40			
2	E14((2117)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top		1,19	4	A STATE OF THE PARTY OF THE PAR	n\a
٠,		Conc. Pt. (ibs)	L	01-02-10	01-02-10	Top	.27	5 138		PHOFESSION	n/a
. 4 .	J2(i3105)			06-01-04	06-01-04	Top	86	6 501	· #5	A STATE OF THE PARTY OF THE PAR	nlay
5	B12(13231)	Conc. Pt. (lbs)	7-	00-01-0-1	00-01-04	IOP	•		1 3	A solo	2 W
	•		Enstand	Dem	and/	-		•	180	(1010li)	D CO

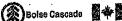
Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	11,796 ft-lbs	23,220 ft-lbs	50.8%	1	06-01-04
End Shear	3,366 lbs	11.571 lbs	29.1%	1	10-01-00
Total Load Deflection	1/411 (0.307")	n\a	58.3%	4	05-09-04
	L/640 (0.198")	n\a	56.2%	Б.	05-09-04
Live Load Deflection Max Defl.	0,307"	rı\a	n\a	4	05-09-04
Snan / Denth	13.3		• •		٠, ٠

Rearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B1	Wall/Plate	5-1/2" x.3-1/2"	4,842 lbs	47.1%	20.6%	Unspecified	
B2	Hanger	3" x 3-1/2"	3,747 lbs	· ri\a	29.3%	HGUS410	

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

> DYB NU. YAM 22-99-1814 STRUCTURAL COMPONENT OHLY

T. 190373





PASSED

2ND FLOOR FRAMING\Flush Beams\B10(i3232)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report Bulld 6476

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

Designer:

Description: 2ND FLOOR FRAMING\Flush Beams\B10(i3232) Specifier:

Company:

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.

Hanger Manufacturer: Unassigned

CONFORMS TO OBG 2012

Flie name: TH9C LOT1 SUNKEN.mmdl

Resistance Factor phi has been applied to all presented results per CSA Q88.

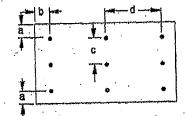
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition. Importance Factor : Normal Part code : Part 9

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.

Connection Diagram: Full Length of Member



a minimum = 2" b minimum = 3"

411 c = 2-3/4" d = 🐠

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: '

Nalls ...ر 31/2" ARDOX SPIRAL PHOPESSION !

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STRUCTURAL

COMPONENT ONLY

BC CALCO, BC FRAMERO, AJSTM ALLIOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

T- 1902374





PASSED

2ND FLOOR FRAMING\Flush Beams\B11(i3092)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report **Build 6475**

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer: Code reports:

CCMC 12472-R

File name:

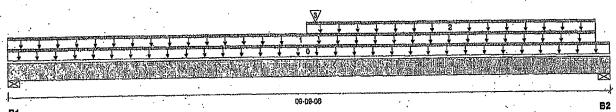
TH9C LOT1 SUNKEN.mmdl

2ND FLOOR FRAMING\Flush Beams\B11(i3092) Description:

Wind

Specifier: Designer:

Company:



Total Horizontal Product Length = 09-09-06

Reaction Summary (Down / Uplift) (lbs)

Live 490 / 0 B1, 4-3/8" 866 / 0 537 / 0 956 / 0 B2, 5-1/2"

1 mail Commons						Live	Dead	Snow	Wind	Tributary
Load Summary Tag Description	Load Type	Ref.	Start	End	Loc.	 1.00	0,65	1.00	1.15	und-wallensiijiless
0 Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-09-06	Top	 	5			00-00-00
1 FC4 Floor Material	Unf. Lin. (lb/ft)	L.	00-00-00	09-06-10	Top	26	13			n\a
2 FC4 Floor Material	Unf. Lin. (lb/ft)	اً	04-10-06	09-06-10	Top	19	10			n\a
3 B12(3231)	Conc. Pt. (lbs)	. L	05-00-02	05-00-02	Top	1,469	803	400000000000000000000000000000000000000	*E88.~	n/a
o michamoti			P5	•		. :		10	FESS ₁₀	N. of State of the

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	8.155 ft-lbs	11,610 ft-lbs	70.2%		05-00-02
End Shear	2,000 lbs	5.785 lbs	34.6%	1	08-06-06
Total Load Deflection	L/387 (0.282")	n\a	62.0%	4	04-10-06
Live Load Deflection	L/602 (0.181")	n\a	59.8%	5	04-10-06
Max Defl.	0.282"	. n\a	n\a	4	04-10-06
Coon / Donth	11.5				•

· : ·.	, · · ,		· ·	Demand/ Resistance	Demand/ Resistance		
Bearing	Supports	Dlm. (LxW)	Demand	Support	Member	Material	٠.,
B1	Wall/Plate	4-3/8" x 1-3/4"	1,911 lbs	46.8%	20.5%	Unspecified	
DO.	Moll/Dista	5-1/2" × 1-3/4"	2.106 lbs	41.0% ·	17.9%	Unspecified	

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.

CONFORMS TO OBC 2012

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

importance Factor: Normal Part code: Part 9

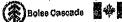
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Completeness and accuracy of input
must be reviewed and verified by a
qualified engineer or other appropriate
expert to assure its adequacy, prior to
anyone relying on such output as
evidence of suitability for a particular
application. The output here is based on
building code-accepted design. application. The output nie is based of building code-accepted design properties and analysis methods, installation of Bolse Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before Installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARO™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

BWB NO , YAN 2500-18H STRUCTURAL COMPONENT ONLY

T. 1902375





PASSED

2ND FLOOR FRAMING\Flush Beams\B12(i3231)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

PHOFESSION

BC CALC® Member Report

Bulld 6475

Job name:

Address:

Code reports:

City, Province, Postal Code: ST ... NES Customer:

Description: 2ND FLOOR FRAMING\Flush Beams\B12(i3231)

Specifier:

Designer:

File name:

TH9C LOT1 SUNKEN.mmdi

Wind

CCMC 12472-R

Company:



· Total Horizontal Product Length = 14-05-08

Snow

Reaction Summary (Down / Uplift) (Ibs)
Bearing Live Dead Bearing

805/0 1,475 / 0 B1, 3" 860/0 499 / 0 B2, 3"

			•	٠.			Live	Dead	Snow.	Wind	Tributary
	d Summary Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1,15	
Tag	Self-Weight	Unf. Lin. (lb/ft)	L.	00-00-00	14-05-08	Тор		10			00-00-00
۷.	STAIR	Unf. Lin. (lb/ft)	L	00-00-00	03-10-00	Top	240	120			n\a
ì	Smoothed Load	Unf. Lin. (lb/ft)	L.	01-06-12	09-06-12	Top	97	48	·		n\a.
		Unf. Lin. (lb/ft)	1.	09-06-12	13-06-12	Top	110	54			n\a
3	Smoothed Load	Conc. Pt. (lbs)	ī.	00-10-12	00-10-12	Top	111 :	56			n\a
4	J5(i3140)		1	14-02-12	14-02-12	Top	93	47			n\a
5	J5(13214)	Conc. Pt. (lbs)	. .	1-1-UZ" 1Z	14.44-12	٦٠.			•		* .

Controls Summary	Factored Demand	.Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	7,345 ft-lbs	23,220 ft-lbs	31.6%	1	06-02-12
End Shear	2,632 lbs	11,571 lbs	22.7%	1	01-00-08
Total Load Deflection	L/447 (0.378")	n\a	53.7%	- 4	07-00-12
	L/701 (0.241")	· n\a	51.4%	5	07-00-12
Live Load Deflection Max Defl.	0.378"	n\a	n\a	4	07-00-12
Span / Depth	17.8				

Rearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
DERING B1	Hanger	3" x 3-1/2"	3,219 lbs	n\a	25.1%	HGUS410	
B2	Hanger	3" x 3-1/2"	1,913 lbs	n∖a .	14.9%	HGUS410	

Cautions

Header for the hanger HGUS410 at B1 Is a Single 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user, Hanger has not been analyzed for adequate capacity.

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

DWIND THE 2801 = 18 H STRUCTURAL COMPONENT ONLY





PASSED

2ND FLOOR FRAMING\Flush Beams\B12(i3231)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Build 6475

Job name:

Customer:

Code reports:

Address:

City, Province, Postal Code: ST ... NES

Description:

Specifier:

File name:

TH9C LOT1 SUNKEN.mmdl

CONFORMS TO OBC 2012

2ND FLOOR FRAMING\Flush Beams\B12(i3231)

CCMC 12472-R

Designer: Company:

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.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

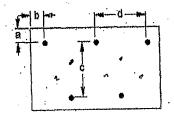
Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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.

Connection Diagram: Full Length of Member



a minimum = ?" b minlmum = 3" d=2011211

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

ÁRDOX SPIRAL



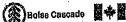
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qualified engineer or other appropriate
excert to assure its adequacy, prior to
anyone relying on such output as
evidence of suitability for a particular
application. The output here is based on
building code-accepted design
properties and analysis methods,
installation of Bolse Cascade
engineered wood products must be in engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®;

DWEND, TAM 2801 - 18 STRUCTURAL COMPONENT ONLY

T.1902376(2)





PASSED

2ND FLOOR FRAMING\Flush Beams\B13(i2825)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report Bulld 6475

Job name:

Address: City, Province, Postal Code: ST ... NES

Customer: Code reports:

CGMC 12472-R

File name:

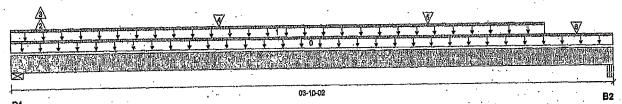
TH9C LOT1 SUNKEN.mmdl

2ND FLOOR FRAMING\Flush Beams\B13(12825) Description:

Specifier:

Designer:

Company:



Total Horizontal Product Length = 03-10-02

Reaction Sur	mmary (Down / Ul	olift) (lbs)	_	han
	Live	Dead	Snow	W
Bearing B1, 3-1/2"	423 / 78	398 / 0	272/0	
B2, 5-1/4"	469/0	480/0	296 / 0	

١	ad Summary		•					Live	Dead	Snow	Wind	Tributary
Ta		Load Type	Rof.	Start	End	Loo.		1.00	0.68	1.00	1.15	
- 450	Self-Weight	Unf, Lin. (lb/ft)	L,	00-00-00	03-10-02	Top ·		·	10			00-00-00
7	E23(i2125)	Unf. Lin. (lb/ft)	` L	00-00-00	03-04-14	Top		77	151	. 147		. n\a
· 1		Conc. Pt. (lbs)	Ĺ	00-02-06	00-02-08	Top		43	-18 -			n\a
2	J2(13212)	Conc. Pt. (lbs)	1	00-02-06	00-02-06	Top		-78			•	n\a
3	J2(l3212)		i.	01-04-00	01-04-00	Top	•	263	132			n\a
4	J2(13132)	Conc. Pt. (lbs)	£.,	• • • • • •				256	128		. •	n\a
5	J2(l3133)	Conc. Pt. (lbs)	. L	02-08-00	02-08-00	Top				67		n\a
. 6	н	Conc. Pt. (lbs)	L	03-07-05	03-07-05	Top		62	83	ō.		11161

Controls Summary	Factored Demand	Factored Resistance	Demand/ Rosistance	Case	Location
Pos. Moment	1,140 ft-lbs	23,220 ft-lbs	4.9%	1	01-08-13
End Shear	927 lbs	11,571 lbs	8.0%	: 1	02-07-06
Total Load Deflection	L/999 (0.003")	n\a	· n\a	58	01-10-04
	L/999 (0.002")	n\a	n\a	85	01-10-04
Live Load Deflection	0.003"	n\a	n\a	58	01-10-04
Max Defi.	4.1				

Dogrina	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
Di Di	Wall/Plate	3-1/2" x 3-1/2"	1,403 lbs	21.4%	9,4%	Unspecified	
D1.	Daniel Into	E 4 140 × 9 4 100 · ·	1 500 lbs	16.3%	7.1%	Unspecified	

Beam

Design meets Code minimum (L/240) Total load deflection criteria. Design meets Code minimum (L/360) Live load deflection criteria.

CONFORMS TO OBG 2012 Calculations assume member is fully braced. Resistance Factor phi has been applied to all presented results per CSA 086.

EC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086. Unbalanced snow loads determined from building geometry were used in selected product's

ventication.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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.

DW# NO. PAM 2-802-19 STRUCTURAL COMPONENT ONLY

T. (90237)





PASSED

2ND FLOOR FRAMING\Flush Beams\B13(i2825)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Build 6476

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer: Code reports:

CCMC 12472-R

File name:

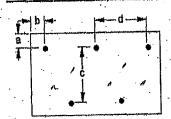
TH9C LOT1 SUNKEN.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B13(i2825)

Specifier: Designer:

Company:

Connection Diagram: Full Length of Member



a.minimum = \$" b minimum = 3"

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. Nails.

Connectors are:



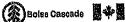
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BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

BWEND, THE 2302 TIPH STRUCTURAL COMPONENT ONLY

T. 190237760





PASSED

2ND FLOOR FRAMING\Flush Beams\B14(12179)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report Build 6476

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN.mmdl

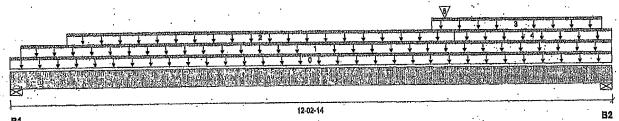
Description: 2ND FLOOR FRAMING\Flush Beams\B14(i2179)

Wind

Specifier:

Designer:

Company:



Total Horizontal Product Length = 12-02-14

Reaction Summary (Down / Uplift) (lbs) Snow Dead 206/0 57/0 170/0 B1, 5-1/2 279 / 0 273/0 508 / 0 B2, 2-3/8"

•			•							A	160	Tullacedan ma
Load Summ	ani :	•						Live	Dead	Snow	Wind	Tributary
 		Load Type	Ref.	Start	Ĕnd	Loc.		1.00	0.65	1.00	1.15	
Tag Description				00-00-00	12-02-14	Top	.,	Territor, Petrolin	10	······································		00-00-00
Self-Weight	Πŧ	Unf. Lin. (lb/ft)	į.					_	-	:		
1 FC4 Floor	Material	Unf. Lin. (lb/ft)	Ļ	00-02-12	12-02-14	Top .		9	5			n\a
2 FC4 Floor		Unf. Lin. (lb/ft)	L	01-02-04	80-00-80	Top		18	9			n\a
•		Unf. Lin. (lb/ft)	1.	08-07-00	12-00-08	Top		44	121	84		n\a
3 E23(12119			ī	09-00-08	12-02-14	Top		6	3		• •	n\a
4 FC4 Floor	Material	Unf. Lin. (lb/ft)	L.	,				٧.	-	A Mary		
5 . •		Conc. Pt. (lbs)	L	08-10-04	08-10-04	Top	•	24	45	45°	88104	a/n

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	2.521 ft-lbs	23,220 ft-lbs	10.9%	1	08-07-00
End Shear	1,051 lbs	11.571 lbs	9.1%	1	11-03-00
Total Load Deflection	L/999 (0.093")	n\a	n\a	35	06-09-00
Live Load Deflection	L/999 (0.049")	n\a	n\a	51	06-09-00
Max Defi.	0.093"	n\a	nla	35	06-09-00
Span / Depth	14.8				

Bearing St	ipports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Wa	IVPlate	5-1/2" x 3-1/2" .	• · · · · · ·	5.5% 29.9%	2.4% 13.1%	Unspecified Unspecified

Notes

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

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

Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.

CONFORMS TO OBG 2012

Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

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

verification. Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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.

BY8 NO. FAM 23031 STRUCTURAL COMPONENT ONLY

T. 1902378





PASSED

2ND FLOOR FRAMING\Flush Beams\B14(12179)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer: Code reports:

CCMC 12472-R

File name:

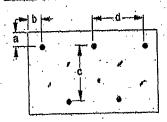
TH9C LOT1 SUNKEN.mmdl

2ND FLOOR FRAMING\Flush Beams\B14(i2179) Description:

Specifier: Designer:

Company:

Connection Diagram: Full Length of Member



a minimum = 🖫 b minimum = 3" d= 12 12 W

ARDOX SPIRAL



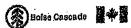
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BC CALCO, BC FRAMERO, AJSTM ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

8 WO NO , YAM 2303.186 STRUCTURAL COMPONENT ONLY

T. 1902378W



PASSED

2ND FLOOR FRAMING\Flush Beams\B15(i2064)

Dry | 1.span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Bulld 6476 Job name:

Customer:

Code reports:

Address: City, Province, Postal Code: ST ... NES

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B15(i2064)

Specifier:

Designer: Company:

	•	•			
			•		
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	· 10年,15年5日,至6月1日,15月1日,15月1日,15月1日,15月1日,15月1日,15月1日 15月1日 15月1日	2.000 Hall Bar Charles (1980年) 1985年 1986年 1	17 (1950) 由 · 5 2 (2) [1] [1] [1] [2] [2] [2] [2] [2] [2] [2] [2] [2] [2		以为"特别"。 10. 计数据 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.
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	Laborate With California all all and the control of	All the best of the second sec			
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. *	· Htf				
•	w	the state of the s			
					•
	,		00-10-00	•	·
		•	24 19 MA		R2

Total Horizontal Product Length = 00-10-00

Reaction Sum	mary (Down	/ Uplift) (lbs)	Snow	Wind
Bearing	Live	· Dead	the first of the last of the l	6.4 (1.1 pc
B1, 4-1/8"	15/0	56 / 0	29/0	
B2, 3"	12/0	45 / 0	23/0	

1 and Communicate						. Live	Dead	Snow	Wind	Tributary
Load Summary Tag Description	Load Type	Ref.	Start	End	Log.	1.00	0.65	1.00	1.15	
0 Self-Weight	Unf. Lin. (lb/ft)	Ľ	00-00-00	00-10-00	Top		10	,		00-00-00
1 E24(I2124)	Unf. Lin. (lb/ft)	L	00-00-00	00-10-00	Top	33	111	63		n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	5 ft-lbs	23,220 ft-lbs	n\a	13	00-05-09
End Shear	33 lbs	11,571 lbs	0.3%	13	00-04-02
Snan / Denth	0.5	• •			· //

Bearing Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Beam	4-1/8" x 3-1/2"	129 lbs	1.7%	0,7%	Unspecified
B2 Hanger	3" x 3-1/2"	103 lbs	n\a	0.8%	HGUS410

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

Notes

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

Resistance Factor phi has been applied to all presented results per CSA O86. CONFORMS TO OBC 2012 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

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

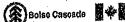
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Member has no side loads.

STRUCTURAL COMPONENT ONLY

-FL902379





PASSED

2ND FLOOR FRAMING\Flush Beams\B15(I2064)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report Bulld 6475

Job name: Address:

Code reports:

City, Province, Postal Code: ST ... NES Customer:

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN.mmdl

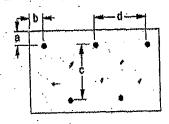
Description:

2ND FLOOR FRAMING\Flush Beams\B15(i2064)

Specifier: Designer:

Company:

Connection Diagram: Full Length of Member



a minimum = P" b minimum = 3" 0 = 1-1/2" d = 20 4

Member has no side loads.



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DWOND, TAM 233 STRUCTURAL COMPONENT ONLY

T-1902379(M)



PASSED

2ND FLOOR FRAMING\Flush Beams\B7(i3268)

BC CALC® Member Report

Dry | 1 span | No cant.

January 29, 2019 15:52:18

Bulld 6475

Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports: CCMC 12472-R File name: TH9C LOT1 SUNKEN.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B7(13268)

Specifier: Designer:

Company:

		the supplies of the supplies o
The second secon		
		der normalistation of the second seco
Company of the second s		V V V V V V V V V V V V V V V V V V V
<u> </u>	The second secon	
THE THE WAY THE PARTY AND ADDRESS OF THE PARTY OF THE PAR	而起来注题,因为最近是"影"。 25 mm 10 mm	
上共2.27、1942年20日20日20日20日20日20日20日20日20日20日20日20日20日2	是是我们们的400000000000000000000000000000000000	
. The state of the	A transfer of the second secon	
1) ·		
	44.04.00	
1.	11-04-98	· mo
D/ .		9 %

Total Horizontal Product Length = 11-04-08

Reaction Summary	/ (Down / Uplift) ((lbs)	
Bearing	Live	Déad	Snow
B1, 3"	2,576 / 0	1,342 / 0	
B2, 3-1/2"	2,156 / 0	1,152 / 0	

1	J Commonne			•			rive	Dead	SHOW	AAIRIG	1 tinnthià
	d Summary	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
Tag		Unf, Lin, (lb/ft)	- 	00-00-00	11-04-08	Top		10	,		00-00-00
Ų	Self-Weight	*	ï	00-00-00	10-08-02	Top	450	225			n\a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-00	10-00-02	ιυp	700	~~0		-	

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Сазе	Location
Pos. Moment	14,412 ft-lbs	23,220 ft-lbs	62.1%	1	05-10-02
End Shear	4.691 lbs	11.571 lbs	40.5%	1	01-00-08
Total Load Deflection	L/301 (0.436")	n\a	79.6%	. 4	05-08-02
Live Load Deflection	L/459 (0.287")	· n\a	78.5%	5	05-08-02
Max Defl.	0.436"	n/a	n\a	4	05-08-02
Span / Depth	13.8	•	•		

Resilna	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column	3" x 3-1/2"	5,542 lbs	65.0%	43.3%	Unspecified
B2	Wall/Plate	3-1/2" x 3-1/2"	4,674 lbs	71.5%	31.3%	Unspecified



Notes

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

Design meets Code minimum (L/380) Live load deflection criteria.

Calculations assume member is fully braced.

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

CUNFORMS TO OBC 2012

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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.

BW8 NO . TAM 2 305-18 STRUCTURAL COMPONENT ONLY





PASSED

2ND FLOOR FRAMING\Flush Beams\B7(i3268)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report

Build 6476

Job name:

Address: City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN.mmdl

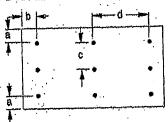
Description: 2ND FLOOR FRAMING\Flush Beams\B7(i3268)

Specifier:

Designer:

Company:

Connection Diagram: Full Length of Member



a minimum = 2" b minimum = 3"

c = 2-3/4" d= 49 6"

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. Nalls Connectors are:

ARDOX SPIRAL



Disclosure

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STRUCTURAL COMPONENT ONLY

- Gustol

UNENU . FAM 2-305



PASSED

2ND FLOOR FRAMING\Flush Beams\B8(i2910)

Dry | 1 span | No cant.

January 29, 2019 16:52:18

BC CALC® Member Report

Bulld 6475

Job name:

Address: City, Province, Postal Code: ST ... NES

File name: Description:

Specifier: Designer:

Customer: CCMC 12472-R Code reports:

Company:

TH9C LOT1 SUNKEN.mmdl

2ND FLOOR FRAMING\Flush Beams\B8(I2910)

Total property and the second		7
	11-00-08	 B2
B1.	were the administration to be made to de Administration	

Total Horizontal Product Length = 11-00-08

Reaction Summ	nary (Down / Up	. Dead	Snow	Wind	***************************************
B1, 5-1/2" B2, 3"	2,357 / 0 2,419 / 0	1,270 / 0 1,262 / 0	• •	•	• •
40 mm 1 mm	•				

	• •	•					Live	Dead	Snow	Wind	Tributary
	Load Summary	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.16	-
	Tag Description	Unf. Lin. (lb/ft)		00-00-00	11-00-08	Top		10		•	00-00-00
	0 Self-Weight 1 Smoothed Load	Unf. Lin. (lb/ft)	Ĺ.	01-06-10	09-08-06	Top	453	226			n\a
	2 E17(12120)	Cono. Pt. (lbs)	L	00-02-12	00-02-12	Тор		37			n\a
	2 (1/(2/20)	Conc. Pt. (lbs)	L.	01-00-06	01-00-08	Top	510	255	•		n\a
•	1 -	Conc. Pt. (lbs)	L	10-02-10	10-02-10	Top	576 .	288	•		n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location ·
And the second of the second o	13,558 ft-lbs	23,220 ft-lbs	68.4%	1	06-02-06
Pos. Moment	4.855 lbs	11,571 lbs	42.0%	· 1	10-00-00
End Shear		n\a	72.5%	4	05-08-06
Total Load Deflection	L/331 (0.379") L/504 (0.249")	n\a	71.5%	5	05-08-06
Live Load Deflection Max Defl.	0.379"	n\a	nla	4	05-08-06
Span / Depth	13,2			•	

Bearing Supports	Dim, (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Wall/Plate B2 Column	6-1/2" x 3-1/2" 3" x 3-1/2"	5,123 lbs 5,206 lbs	49.8% 61.1%	21.8% 40.6%	Unspecified Unspecified



Notes

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

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

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. CONFORMS TO GBC 2012 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2016 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9.

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.

> STRUCTURAL COMPONENT ONLY

> > T-190238



PASSED

2ND FLOOR FRAMING\Flush Beams\B8(I2910)

Dry | 1 span | No cant.

January 29, 2019 15:52:18

BC CALC® Member Report Bulld 6475

Job name: Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

File name:

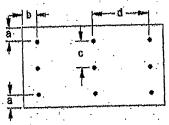
THIC LOTI SUNKEN, mmd

2ND FLOOR FRAMING\Flush Beams\B8(12910) Description:

Specifier:

Designer: Company:

Connection Diagram: Full Length of Member



a minimum = 2" b minimum ≈ 3" c = 2-3/4" 6" d =d

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

814" ARDOX SPIRAL



Disclosure

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OWB NO. TAM 2306 - 191 STRUCTURAL COMPONENT ONLY

T-190281(1)



PASSED

2ND FLOOR FRAMING\Flush Beams\B9(I3034)

BC CALC® Member Report

Bulld 6476 Job name:

Address:

Code reports:

City, Province, Postal Code: ST ... NES

Customer:

CCMC 12472-R

Dry | 1 span | No cant.

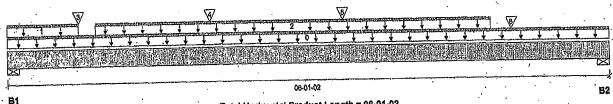
January 29, 2019 15:52:18

TH9C LOT1 SUNKEN.mmdl File name:

2ND FLOOR FRAMING\Flush Beams\B9(i3034) Description:

Specifier: Designer:

Company:



Total Horizontal Product Length = 06-01-02

Reaction Summary (Down / Uplift) (lbs) Wind 584 / 0 1,095 / 0 B1, 6-1/2" 1,176/0 2,218/0 B2, 2-3/4"

							Live	Dead	Snow '	Wind	Tributary
	ad Summary	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
Tes	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	06-01-02	Top		10	•		00-00-00
U	FC4 Floor Material	Unf. Lin. (lb/ft)	Ĺ	00-00-00	00-08-12	Top	· 46 ·	•	•	:	n\a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-10-12	04-10-12	Top	226	112			n\a
2		Cond. Pt. (lbs)	L	00-08-12	00-08-12	Top	122	61			n\a
. 3	J5(i3144)	Conc. Pt. (lbs)	Ĺ	02-00-12	02-00-12	Top	.138	69			n\a
4	J5((3145)	Conc. Pt. (lbs)	ī.	03-04-12	03-04-12	Top	138	69			. n\a
5.	J5(I3146)	Conc. Pt. (lbs)	Ĺ	05-01-05	05-01-05	Top	1,948	1,018	•		n\a'

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
	4,306 ft-lbs	23,220 ft-lbs	18.5%	1	03-04-12
Pos. Moment	4.505 lbs	11,671 lbs	38.9%	1	05-00-14
End Shear	L/999 (0.034")	n\a	n\a	4	03-03-04
Total Load Deflection		n\a	n\a	5	03-03-04
Live Load Deflection Max Defl.	L/999 (0.022") 0.034"	n\a	n\a	4	03-03-04
Span / Depth	7.0				

Demand/ Demand/ Resistance Resistance Member Material Support Unspecified 2,372 lbs 23.1% 10,1% Unspecified 40.9% 93.3% 4,797 lbs

B1

B2

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

5-1/2" x 3-1/2"

2-3/4" x 3-1/2"

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

Calculations assume member is fully braced.

Bearing Supports Dim. (LxW)

Wall/Plate

Wall/Plate

Resistance Factor phi has been applied to all presented results per CSA O86 CONFORMS TO OBC 2012 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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

> STRUCTURAL COMPONENT ONLY

> > T-190282





PASSED

2ND FLOOR FRAMING\Flush Beams\B9(i3034)

Dry | 1 span | No cant,

January 29, 2019 15:52:18

BC CALC® Member Report

Bulld 6475 Job name:

Address:

City, Province, Postal Code: ST ... NES

Customer:

Code reports:

CCMC 12472-R

File name:

TH9C LOT1 SUNKEN,mmdl

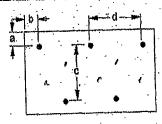
Description: 2ND FLOOR FRAMING\Flush Beams\B9(i3034)

Specifier:

Designer:

Company

Connection Diagram: Full Length of Member



a minimum = 2" b minimum = 3"

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: (a) on Nalis

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DWB NO . TAN 2307 . 184 STRUCTURAL COMPONENT ONLY

T-190282(V)



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







			В	are		<u> </u>	1/2" Gyps	um Ceiling	
Depth	Series		On Centi	e Spacing			On Cent	re Spacing	
•		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	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"
9-1/2"	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"
	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"
44 77 (01)	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-1"
11-7/8"	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"
	N1-90x	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"
14"	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21¹-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
101	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
16"	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"

			Mid-Spar	n Blocking		Mid-S	pan Blocking an	d 1/2" Gypsum	Ceiling
Depth	Series		On Centr	e Spacing			On Centr	e Spacing	
•		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	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"
9-1/2"	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"
	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"
(01)	NI-60	21'-9"	19'-8"	18'-5"	17'-1"	21'-9"	19'-8" '	18'-5"	17'-1"
11-7/8"	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"
	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"
14"	NI-70	26'-1"	24'-3"	22'-9"	21'-0"	26'-8"	24'-3"	22'-9"	21'-0"
	NI-80	26'-6"	24'-7"	23'-3"	21'-6"	27'-1"	24'-10"	23'-3"	21'-6"
	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"
1.011	NI-70	28'-8"	26'-8"	25'-3"	23'-4"	29'-3"	26'-11"	25'-3"	23'-4"
16"	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"

^{1.} 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.

^{2.} 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.

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

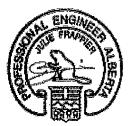
^{4.} Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.

^{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 O86-09, NBC 2010, and OBC 2012.

^{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.



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







			Ва	are		1	1/2" Gyps	sum Ceiling	
Depth	Series		On Centr	e Spacing			On Centr	re 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
	N1-70	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
	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
11-7/8"	N1-70	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
- 411	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
16"	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	Blocking		Mid-S	pan Blocking an	d 1/2" Gypsum	Ceiling
Depth	Series		On Centr	e Spacing			On Centr	e Spacing	
		12"	16"	19.2"	24"	12"	16"	19,2"	24"
	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
9-1/2"	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
	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
(-1)	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A
11-7/8"	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
	N1-90x	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
	N1-60	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'-4"	23'-2"	N/A
	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
15	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
16"	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

^{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/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.

^{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 O86-09, NBC 2010, and OBC 2012.

^{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.



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







			Ba	are		1	1/2" Gyps	um Ceiling	
Depth	Series		On Centr	e Spacing			On Centr	e Spacing	
Бери		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	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"
9-1/2"	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-6"	16'-7"	15'-11"	15'-3"
J -/	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"
	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"
11-7/8"	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	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"
14"	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
14	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
16"	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25' -9 "	23'-10"	22'-9"	21'-6"
	Ni-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

			Mid-Spar	ı Blocking		Mid-S	pan Blocking an	d 1/2" Gypsum	Ceiling
Depth	Series	On Centre Spacing				On Centre Spacing			
Берия	301.23	12"	16"	19.2"	24"	12"	16"	19.2"	24"
	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"
9-1/2"	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
J =1-	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"
	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 ⁷ -4"	22'-8"	20'-10"	19'-8"	18'-4"
11-7/8"	NI-70	23'-4"	21'-8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"
	NI-80	23'-7"	21'-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"
	NI-90x	24'-3"	22'-6"	21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"
	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'
14"	NI-70	26'-1"	24'-3"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"
14	NI-80	26'-6"	24'-7"	23'-5"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90x	. 27'-3"	25'-4"	24'-1"	22'-9"	27'-9"	25'-11"	24'-8"	23'-4"
	NI-60	27'-3"	25'-5"	24'-2"	22'-10"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-00 NI-70	28'-8"	26'-8"	25'-4"	23'-11"	29'-3"	27'-4"	26'-1"	24'-8"
16"	NI-70 NI-80	29'-1"	27'-0"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-80 NI-90x	29'-11"	27'-10"	26'-6"	25'-0"	30'-6"	28'-5"	27'-2"	25'-8"

^{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/480 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 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum celling 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 celling 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 O86-09, NBC 2010, and OBC 2012.

^{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.



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







			В	are		1	1/2" Gyps	um Ceiling	
Depth	Series		On Centr	e Spacing			On Centi	e Spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	N1-20	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
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"	15'-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
	N1-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
11-7/8"	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	N1-80	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
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
16"	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 Centre Spacing			On Centre Spacing				
-1		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	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
9-1/2"	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
	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
11-7/8"	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
	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
14"	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
	N1-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-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 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.

^{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.

Minimum bearing length shall be 1-3/4 littles 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.

^{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 O86-09, NBC 2010, and OBC 2012.

^{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.

Construction Detail Limit States Design

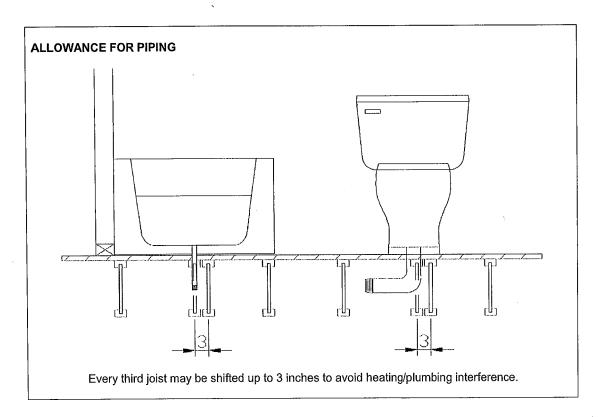


Allowance for Piping (Installation Notes)

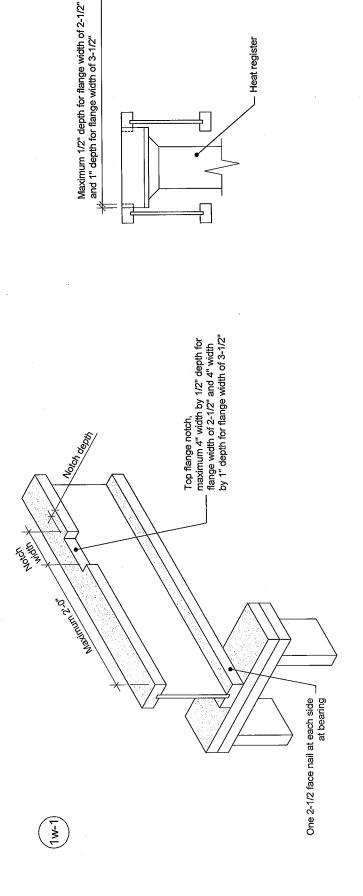
The floor layouts have usually not been checked for heating and/or plumbing interference. On-site adjustment of joists of up to 3 inches is permitted to avoid interferences. When moving a joist, the subfloor thickness shall be checked with code requirements when the joist spacing exceeds 19.2 inches. Except for cutting to length, I-joist flanges should never be cut, drilled, or notched.

Installation of Nordic I-joists shall be as per *Nordic Joist Installation Guide for Residential Floors*. Refer to Tables 1 and 2 for maximum web hole and duct chase openings, respectively. These tables are based on the I-joists being used at their maximum spans. The minimum distance given may be reduced for shorter spans; contact your distributor for additional information.

The detail below shows the 3-inch allowance for piping. Every third joist may be shifted up to 3 inches to avoid heating/plumbing interference. For other applications, please contact your distributor.



Revised April 12, 2012



Heat register

Notes:

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

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

2. The maximum dimensions for a notch on the side of the top flange are 4-inch width by 1-inch depth for flange width of 2-1/2 inches.

width of 2-1/2 inches, and 4-inch width by 1-inch depth for flange width of 3-1/2 inches.

3. This detail applies to simple-span joists and multiple-span joists where the notch is located at the end half-span.

4. For other applications, contact Nordic Structures.

This document supersedes all previous versions. If the document has been in effect for more than one year, consult nordic.ca or contact Nordic Structures.

All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for darity.

	T.514-871-8526
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STRUCTURES	nordic.ca

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