

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	17
J1DJ	18-00-00	9 1/2" NI-40x	2	2
J2	16-00-00	9 1/2" NI-40x	1	10
J2DJ	16-00-00	9 1/2" NI-40x	2	2
J3	14-00-00	9 1/2" NI-40x	1	17
J4	12-00-00	9 1/2" NI-40x	1	1
J5	10-00-00	9 1/2" NI-40x	1	4
J6	8-00-00	9 1/2" NI-40x	1	10
J7	6-00-00	9 1/2" NI-40x	1	2
J8	4-00-00	9 1/2" NI-40x	1	1
J9	2-00-00	9 1/2" NI-40x	1	4
B6	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B14L	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B1	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B10L	10-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B11L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B15L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B2	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B13L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B7	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B3	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B12L	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
25	H1	IUS2.56/9.5
14	H1	IUS2.56/9.5
2	H1	IUS2.56/9.5
5	H1	IUS2.56/9.5
6	H1	IUS2.56/9.5
2	H2	HUS1.81/10
1	H2	HUS1.81/10
1	H4	HGUS410
1	H4	HGUS410
1	H5	HU310-2
1	H5	HU310-2

DATE: 5/25/23

1st FLOOR FRAMING



FROM PLAN DATED: JULY-2019  
BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
ELEVATION: B  
LOT:  
CITY: INNISFIL  
SALESMAN: WILL GARCIA  
DESIGNER: AJ  
REVISION: lbv

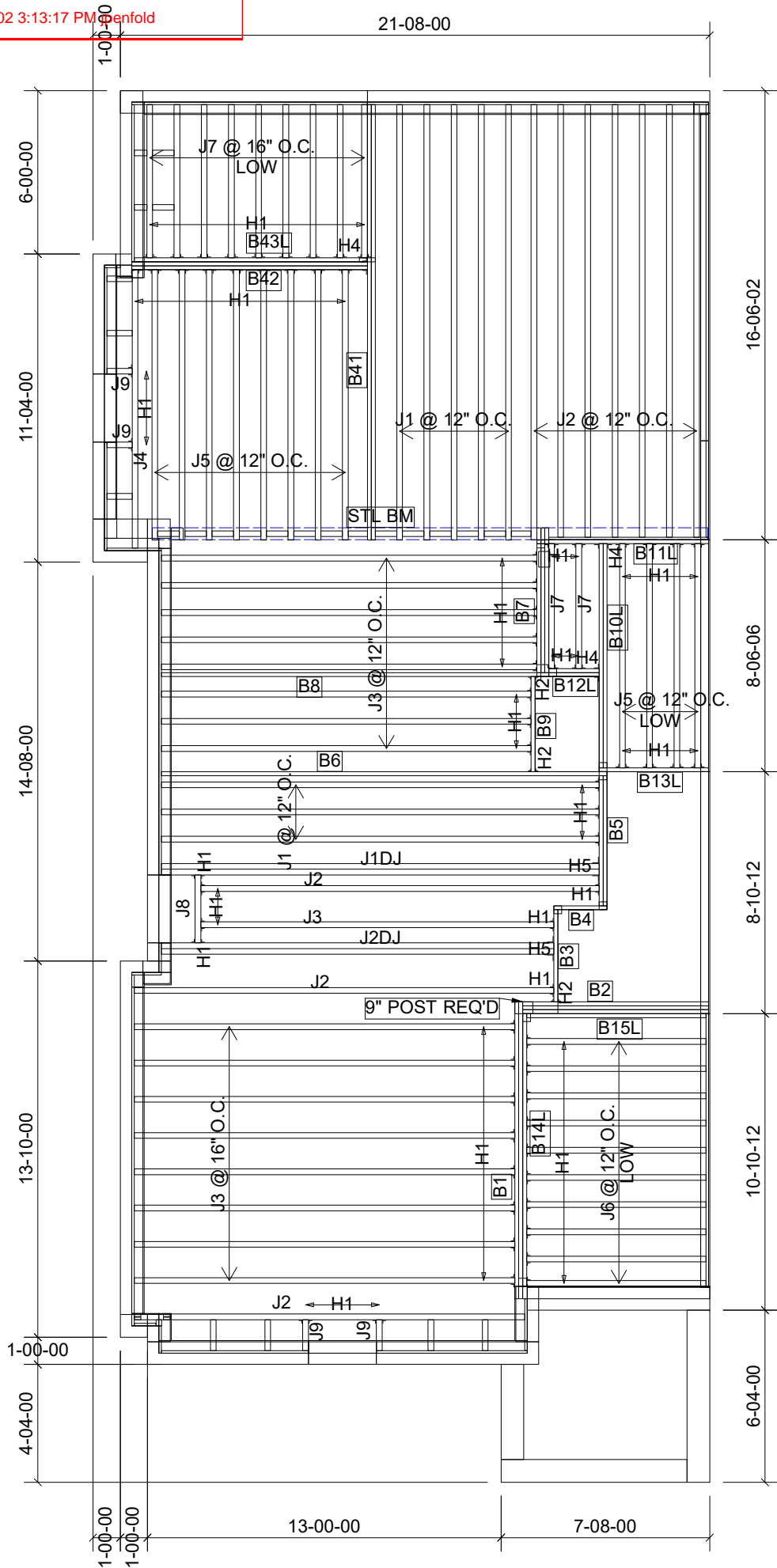
REFER TO THE **NORDIC INSTALLATION GUIDE** FOR PROPER STORAGE AND INSTALLATION.  
**SQUASH BLOCKS** OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.  
**MULTIPLE SQUASH BLOCKS** REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.  
**CANTILEVERED JOISTS** INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.  
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.  
**CERAMIC TILE** APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.  
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

**LOADING:**  
LIVE LOAD: 40.0 lb/ft<sup>2</sup>  
DEAD LOAD: 15.0 lb/ft<sup>2</sup>  
TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18'-00"-00	9 1/2" NI-40x	1	8
J1DJ	18'-00"-00	9 1/2" NI-40x	2	2
J2	16'-00"-00	9 1/2" NI-40x	1	10
J2DJ	16'-00"-00	9 1/2" NI-40x	2	2
J3	14'-00"-00	9 1/2" NI-40x	1	17
J4	12'-00"-00	9 1/2" NI-40x	1	1
J5	10'-00"-00	9 1/2" NI-40x	1	12
J6	8'-00"-00	9 1/2" NI-40x	1	10
J7	6'-00"-00	9 1/2" NI-40x	1	11
J8	4'-00"-00	9 1/2" NI-40x	1	1
J9	2'-00"-00	9 1/2" NI-40x	1	4
B6	18'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B41	18'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B8	16'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B14L	12'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B1	12'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B43L	10'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10L	10'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B42	10'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B11L	8'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B15L	8'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B2	8'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B13L	6'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B5	6'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B7	6'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B3	4'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	4'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4	2'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B12L	2'-00"-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
34	H1	IUS2.56/9.5
23	H1	IUS2.56/9.5
2	H1	IUS2.56/9.5
5	H1	IUS2.56/9.5
6	H1	IUS2.56/9.5
2	H2	HUS1.81/10
1	H2	HUS1.81/10
1	H4	HGUS410
2	H4	HGUS410
1	H5	HU310-2
1	H5	HU310-2

DATE: 5/25/23

1st FLOOR FRAMING  
SUNKEN MUDROOM



FROM PLAN DATED: JULY-2019  
BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
ELEVATION: B  
LOT:  
CITY: INNISFIL  
SALESMAN: WILL GARCIA  
DESIGNER: AJ  
REVISION: lbv

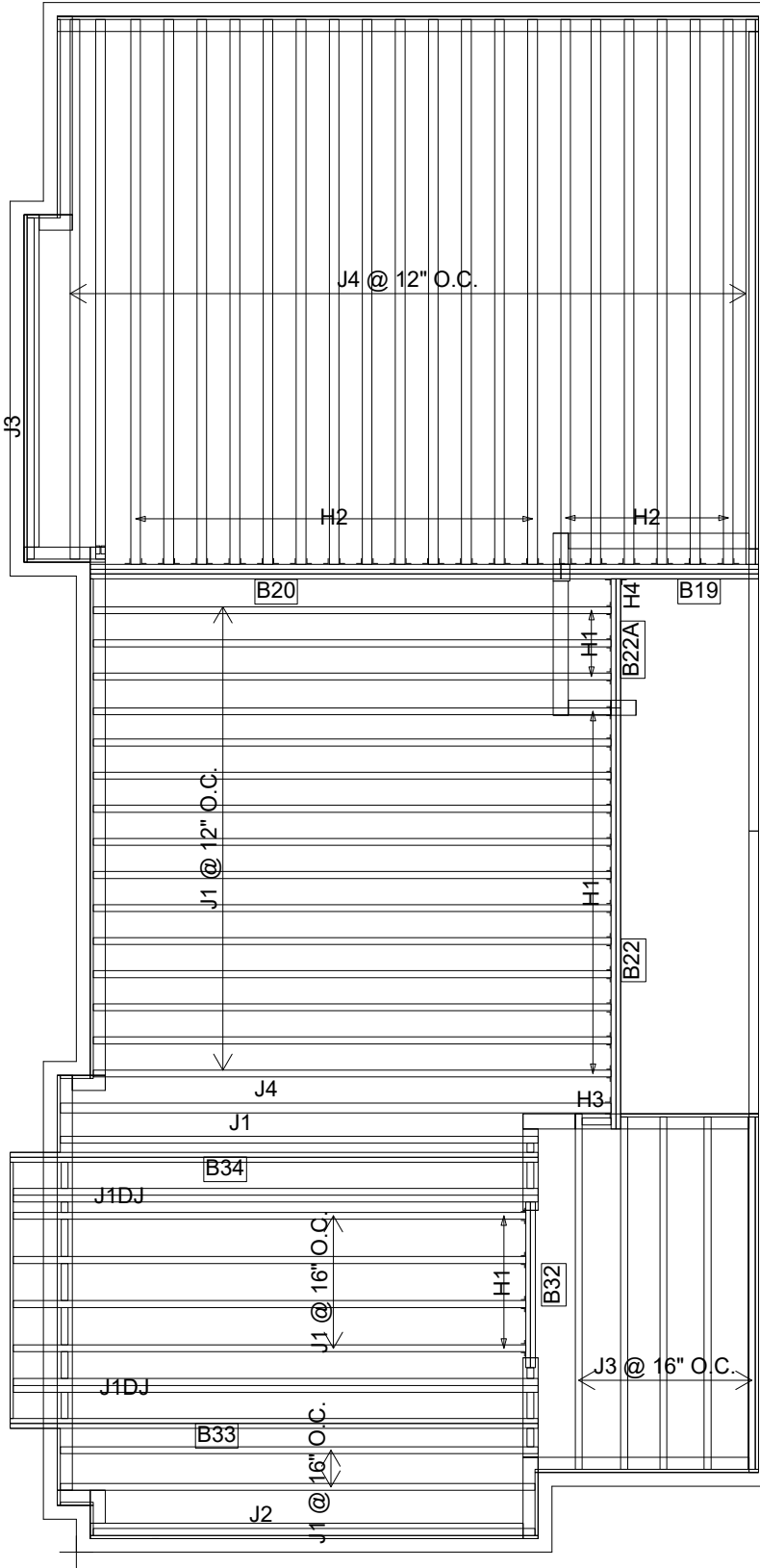
REFER TO THE **NORDIC INSTALLATION GUIDE** FOR PROPER STORAGE AND INSTALLATION.  
**SQUASH BLOCKS** OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.  
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FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.  
**CERAMIC TILE** APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.  
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER** **MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

**LOADING:**  
LIVE LOAD: 40.0 lb/ft<sup>2</sup>  
DEAD LOAD: 15.0 lb/ft<sup>2</sup>  
TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

**SUBFLOOR:** 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	22
J1DJ	16-00-00	9 1/2" NI-40x	2	4
J2	14-00-00	9 1/2" NI-40x	1	1
J3	12-00-00	9 1/2" NI-40x	1	6
J4	18-00-00	9 1/2" NI-80	1	23
B33	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B34	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B20	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B22	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B32	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B19	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B22A	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
19	H1	IUS2.56/9.5
19	H2	IUS3.56/9.5
1	H3	IUS3.56/9.5
1	H4	HGUS410



FROM PLAN DATED: JULY-2019  
BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
ELEVATION: B  
LOT:  
CITY: INNISFIL  
SALESMAN: WILL GARCIA  
DESIGNER: AJ  
REVISION: lbv

REFER TO THE **NORDIC INSTALLATION GUIDE** FOR PROPER STORAGE AND INSTALLATION.  
**SQUASH BLOCKS** OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.  
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FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.  
**CERAMIC TILE** APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.  
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

**LOADING:**  
LIVE LOAD: 40.0 lb/ft<sup>2</sup>  
DEAD LOAD: 15.0 lb/ft<sup>2</sup>  
TILE LOAD: +5.0 lb/ft<sup>2</sup>

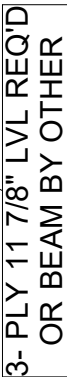
JOIST LL DEFLECTION LIMIT: L/480

**SUBFLOOR:** 5/8" GLUED AND NAILED

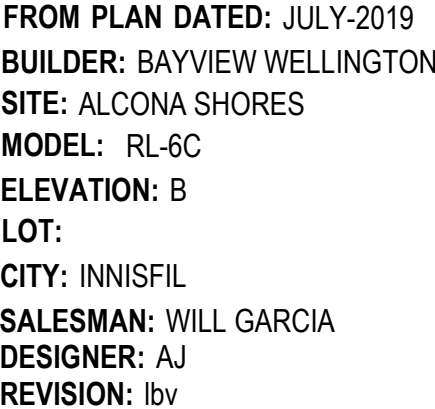
DATE: 5/25/23

2nd FLOOR FRAMING





Connector Summary		
Qty	Manuf	Product
2	H1	IUS2.56/9.5
12	H1	IUS2.56/9.5
15	H1	IUS2.56/9.5
1	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
1	H3	IUS3.56/9.5
1	H4	HGUS410
1	H4	HGUS410
1	H5	HGUS5.50/10
1	H7	HGUS7.25/10



ALL CONNECTORS MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.

ALL BEAM HANGER FASTENERS INSTALLED INTO THE SUPPORTING MEMBER MUST BE A MINIMUM OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

**JOIST LL DEFLECTION LIMIT: L/480**

**SUBFLOOR: 5/8" GLUED AND NAILED**

## 3rd FLOOR FRAMING



# NORDIC

INSTALLATION GUIDE  
NORDIC JOIST

NS-G133   
ENGLISH  
VERSION  
2020-10-01

Engineered Wood Products

## BASIC INSTALLATION GUIDE FOR RESIDENTIAL FLOORS

 **NORDIC  
JOIST**

**NORDIC  
STRUCTURES**

nordic.ca

### INSTALLING NORDIC I-JOISTS

1. Installation of Nordic I-joists shall be as shown in details 1.
2. Except for cutting to length, I-joist flanges should never be cut, drilled or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. Concentrated loads should only be applied to the top surface of the top flange. Concentrated loads should not be suspended from the bottom flange with the exception of light loads, such as ceiling fans or light fixtures.
5. I-joists must be protected from the weather prior to installation.
6. I-joists must not be used in applications where they will be permanently exposed to weather, or will reach a moisture content of 15 percent or greater, such as in swimming pool or hot tub areas. They must not be installed where they will remain in direct contact with concrete or masonry.
7. End bearing length must be at least 1-3/4 inch. For multiple-span joists, intermediate bearing length must be at least 3-1/2 inches.
8. Ends of floor joists shall be restrained to prevent rollover. Use rim board or I-joist blocking panels.
9. I-joists installed beneath bearing walls perpendicular to the joists shall have full-depth blocking panels, rim board, or squash blocks (cripple blocks) to transfer gravity loads from above the floor system to the wall or foundation below.
10. For I-joists installed directly beneath bearing walls parallel to the joists or used as rim board or blocking panels, the maximum vertical load using a single I-joist is 3,300 plf, and 6,000 plf if double I-joists are used.
11. Continuous lateral support of the I-joist's compression flange is required to prevent rotation and buckling. In simple span uses, lateral support of the top flange is normally supplied by the floor sheathing. In multiple-span or cantilever applications, bracing of the I-joist's bottom flange is also required at interior supports of multiple-span joists, and at the end support next to the cantilever extension. The ends of all cantilever extensions must be laterally braced as shown in details 3, 4, or 5.
12. Nails installed in flange face or edge shall be spaced in accordance with the applicable building code requirements or approved building plans, but should not be closer than those specified on page 3.3 of the Nordic Joist Technical Guide (NS-GT3).
13. Details 1 show only I-joist-specific fastener requirements. For other fastener requirements, see the applicable building code.
14. For proper temporary bracing of wood I-joists and placement of temporary construction loads, see APA Technical Note: Temporary Construction Loads over I-Joist Roofs and Floors, Form J735.

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 clarity.

### NORDIC I-JOIST SERIES

#### RESIDENTIAL SERIES

**NI-20**  
**2x3** S-P-F No. 2  
3/8 in. web  
**Depths**  
9-1/2 and 11-7/8 in.  
33 pieces per unit

**NI-40x**  
**2x3** 1950F MSR  
3/8 in. web  
**Depths**  
9-1/2, 11-7/8 and 14 in.  
33 pieces per unit

**NI-60**  
**2x3** 2100F MSR  
3/8 in. web  
**Depths**  
9-1/2, 11-7/8, 14 and 16 in.  
33 pieces per unit

**NI-80**  
**2x4** 2100F MSR  
3/8 in. web  
**Depths**  
9-1/2, 11-7/8, 14 and 16 in.  
23 pieces per unit

**NI-90**  
**2x4** 2400F MSR  
7/16 in. web  
**Depths**  
11-7/8, 14 and 16 in.  
23 pieces per unit

**RIM BOARDS**  
**Width** 1-1/8 in.  
**Length** 16 ft  
**Depths** 9-1/2 to 16 in.  
APA Rim Board Plus

### SAFETY AND CONSTRUCTION PRECAUTIONS

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

#### Avoid Accidents by Following these Important Guidelines:

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

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



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



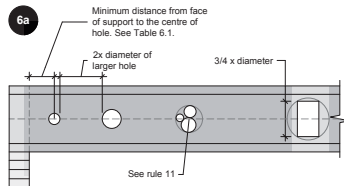
Never stack building materials over unsheathed I-joists. Once sheathed, do not overpress I-joist with concentrated loads from building materials.

### WEB HOLES AND OPENINGS

#### WEB HOLES IN I-JOISTS

##### Rules for Cutting Holes in I-Joists

1. The distance between the inside edge of the support and the centreline of any hole shall be in compliance with the requirements of Table 6.1.
2. I-joist top and bottom flanges must never be cut, notched or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the opening and the adjacent I-joist flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole - or twice the length of the longest side of the longest rectangular hole - and each hole must be sized and located in compliance with the requirements of Table 6.1.
7. Holes measuring 1-1/2 inch or smaller shall be permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.
8. 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.
9. All holes shall be cut in accordance with the restrictions listed above and as illustrated in detail 6a.
10. Limit three maximum-size holes per span.
11. A group of round holes at approximately the same location shall be permitted if it meets the requirements for a single round hole circumscribed around them.

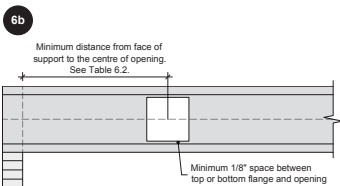


**Notes:**  
1. Never drill, cut or notch the flange, or over-cut the web.  
2. Holes in web should be cut with a sharp saw.  
3. For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular 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.

#### DUCT CHASE OPENINGS

##### Rules for Cutting Duct Chase Openings in I-joists

1. The distance between the inside edge of the support and the centreline of a duct chase opening shall be in compliance with the requirements of Table 6.2.
2. I-joist top and bottom flanges must never be cut, notched or otherwise modified.
3. The maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the opening and the adjacent I-joist flange.
4. All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.
5. Limit one maximum-size duct chase opening per span.

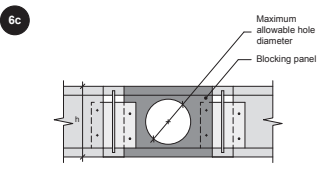


**Notes:**  
1. Never drill, cut or notch the flange, or over-cut the web.  
2. Holes in web should be cut with a sharp saw.  
3. Avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling 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.

#### HOLES IN BLOCKING PANELS

##### Maximum Allowable Hole Size in Lateral-restraint-only Blocking Panels

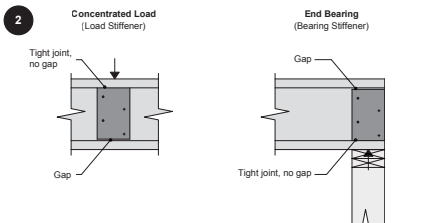
1. The maximum allowable hole size for a lateral-restraint-only blocking panel is 2/3 of the lesser dimension of the blocking's depth or length. Assuming the blocking panel is longer than its height (or depth), the table aside applies. For other applications, contact Nordic Structures.
2. Holes cut into the blocking panels are subject to the following limitations:
  - The top and bottom flanges of an I-joist blocking panel must never be cut, notched or otherwise modified.
  - Field-cut holes must be centred in the blocking horizontally.
  - While round holes are preferred, rectangle holes may be used provided the corners are not over cut. Slightly rounding corners or pre-drilling corners with a 1-inch-diameter bit is recommended.
  - All holes must be cut in a workman-like manner in accordance with the limitations listed above.



I-joist or rim board blocking depth (in.)	Maximum allowable hole diameter (in.) <sup>(1)</sup>
9-1/2	6-1/4
11-7/8	7-3/4
14	9-3/4
16	10-1/2

<sup>(1)</sup> Maximum allowable hole diameter in blocking panel, where the blocking panel is longer than its height.

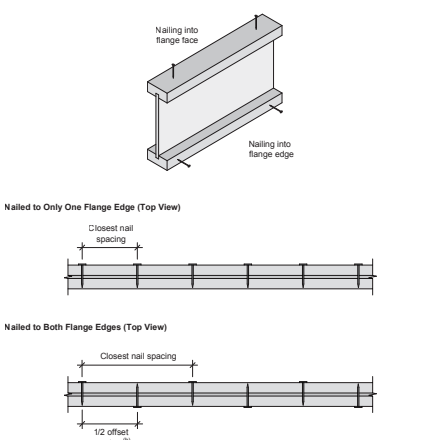
### WEB STIFFENERS



**Stiffener Size Requirements**

Flange width (in.)	Web stiffener size each side of web (in.)
2-1/2	1 x 2 S-16 Minimum width
3-1/2	1-1/2 x 2 S-16 Minimum width

### NAIL SPACING



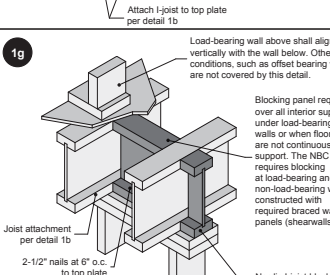
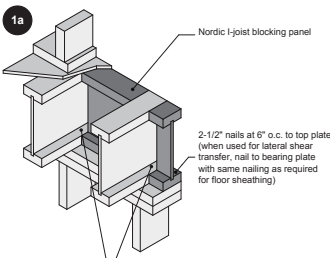
spacing <sup>(1)</sup>

**Recommended Closest Nail Spacing for Fastening Sheathing to I-joist Flanges to Minimize Splitting**

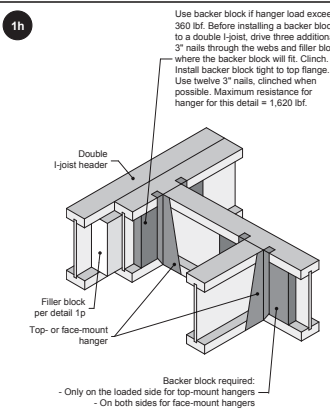
Fastener size (diameter x length)	Flange face nailing <sup>(1)</sup>			Flange edge nailing <sup>(2)</sup>	
	End distance (in.)	Nail spacing (in.)	End distance (in.)	Nail spacing (in.)	
				Nailed to city one flange	Nailed to flange edge
0.128" or smaller in diameter, and 3-1/4" or shorter in length	2	2	2	2	4
Greater than 0.128" up to 0.148" in diameter, and 3-1/4" or shorter in length	2	3	2	3	6

(1) If more than one row is required, offset rows a minimum of 1/2 inch and stagger.

(2) Closest nail spacing measured from one flange edge. Nails on opposite flange edge must be offset one-half the minimum spacing.



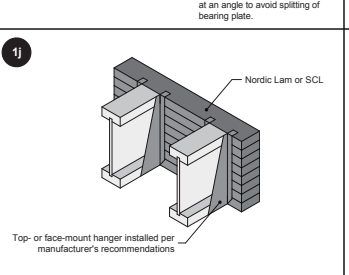
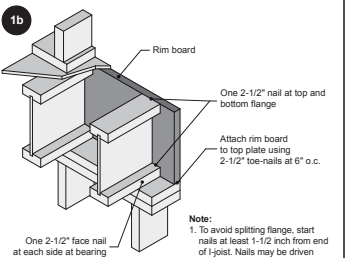
**Notes:**  
1. An occasional blocking panel (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.  
2. For other options, see details 1g-1 to 1g-5.



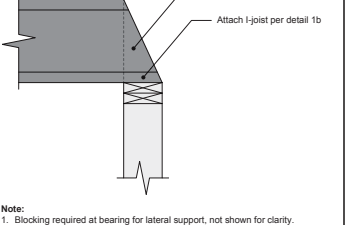
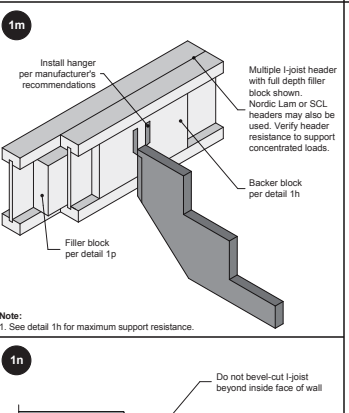
Flange width (in.)	Material thickness required (in.) <sup>(1)</sup>	Minimum depth (in.) <sup>(2)</sup>
2-1/2	1	5-1/2
3-1/2	1-1/2	7-1/4

<sup>(1)</sup> Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-Q325 Standard.  
<sup>(2)</sup> For face-mount hangers use net joist depth minus 3-1/4 inches for joists with 1-1/2-inch-thick flanges.

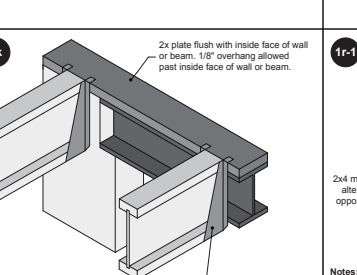
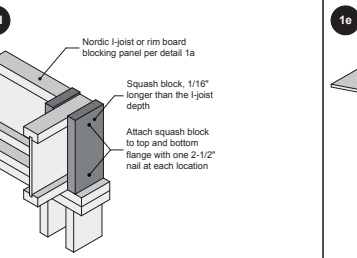
**Notes:**  
1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.  
2. For hanger resistance, see manufacturer's recommendations.  
3. Verify double I-joist resistance to support concentrated loads.  
4. Backer blocks must be long enough to permit required nailing without splitting.



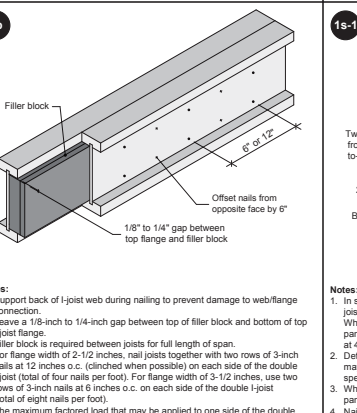
**Notes:**  
1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.  
2. For nailing schedules for Nordic NI-60 or SCL beams, see the manufacturer's recommendations.



**Notes:**  
1. Blocking required at bearing for lateral support, not shown for clarity.



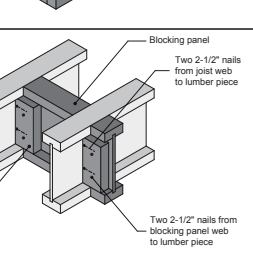
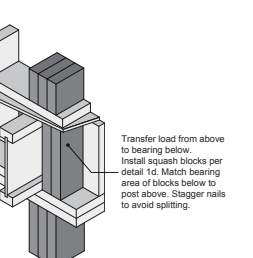
**Notes:**  
1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.



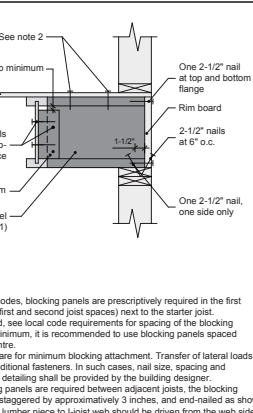
**Filler Block Requirements for Double I-joist Construction**

Flange width (in.)	Net depth (in.)	Filler block size (in.)	Example
2-1/2	9-1/2	2-1/8 to 2-1/4 x 6	2x6 x 5/8" or 3/4" sheathing
	11-7/8	2-1/8 to 2-1/4 x 8	2x8 x 5/8" or 3/4" sheathing
	14	2-1/8 to 2-1/4 x 10	2x10 x 5/8" or 3/4" sheathing
3-1/2	9-1/2	3 x 6	2 x 2x6
	11-7/8	3 x 8	2 x 2x8
	14	3 x 10	2 x 2x10

**Notes:**  
1. The height of the filler block may be different from that specified in the table, as long as it allows nailing and respects the required gap.



**Notes:**  
1. This detail may be used to reduce floor vibration.  
2. Blocking panels may be of any I-joist series. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.  
3. One occasional blocking panel may be left out for the passage of plumbing or ventilation ducts. Otherwise, a hole of not more than 2/3 of the lesser dimension of the blocking depth or length may be drilled in the blocking panel.



**Notes:**  
1. In some local codes, blocking panels are prescriptively required in the first joist space (or first and second joist spaces) next to the starter joist. Where required, see local code requirements for spacing of the blocking panels. As a minimum, it is recommended to use blocking panels spaced at 4 feet on centre.  
2. Details shown are for minimum blocking attachment. Transfer of lateral loads may require additional fasteners. In such cases, nail size, spacing and specific design detailing shall be provided by the building designer.  
3. Where blocking panels are required between adjacent joists, the blocking panels can be staggered by approximately 3 inches, and end-nailed as shown.  
4. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.

TABLE 6.1 - LOCATION OF WEB HOLES

Simple or multiple span																	
Minimum distance from inside face of any support to centre of hole (ft.-in.)																	
Joist depth	Joist series	2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4	
9-1/2"	NI-20	0'-7"	1'-6"	2'-10"	4'-3"	5'-8"	6'-0"	-	-	-	-	-	-	-	-	-	-
	NI-40x	0'-7"	1'-6"	3'-0"	4'-4"	6'-0"	6'-4"	-	-	-	-	-	-	-	-	-	-
	NI-60	1'-3"	2'-6"	4'-0"	5'-4"	7'-0"	7'-5"	-	-	-	-	-	-	-	-	-	-
	NI-80	2'-3"	3'-6"	5'-0"	6'-6"	8'-2"	8'-8"	-	-	-	-	-	-	-	-	-	-
11-7/8"	NI-20	0'-7"	0'-8"	1'-0"	2'-4"	3'-8"	4'-0"	5'-0"	6'-6"	7'-9"	-	-	-	-	-	-	-
	NI-40x	0'-7"	0'-8"	1'-3"	2'-8"	4'-0"	4'-4"	5'-5"	7'-0"	8'-4"	-	-	-	-	-	-	-
	NI-60	0'-7"	1'-8"	3'-0"	4'-3"	5'-9"	6'-0"	7'-3"	8'-10"	10'-0"	-	-	-	-	-	-	-
	NI-80	1'-6"	2'-10"	4'-2"	5'-6"	7'-0"	7'-5"	8'-6"	10'-3"	11'-4"	-	-	-	-	-	-	-
14"	NI-20	0'-7"	0'-8"	1'-5"	3'-2"	4'-10"	5'-4"	6'-9"	8'-9"	10'-2"	-	-	-	-	-	-	-
	NI-40x	0'-7"	0'-8"	0'-8"	1'-10"	2'-4"	2'-9"	3'-9"	5'-2"	6'-0"	6'-6"	8'-3"	10'-2"	-	-	-	-
	NI-60	0'-7"	0'-8"	1'-8"	3'-0"	4'-3"	4'-8"	5'-8"	7'-2"	8'-0"	8'-8"	10'-4"	11'-9"	-	-	-	-
	NI-80	0'-10"	2'-0"	3'-4"	4'-9"	6'-2"	6'-5"	7'-6"	9'-0"	10'-0"	10'-8"	12'-4"	13'-9"	-	-	-	-
16"	NI-20	0'-7"	0'-8"	0'-10"	2'-5"	4'-0"	4'-5"	5'-9"	7'-5"	8'-8"	9'-4"	11'-4"	12'-11"	-	-	-	-
	NI-40x	0'-7"	0'-8"	0'-8"	1'-6"	2'-10"	3'-2"	4'-2"	5'-8"	6'-4"	7'-0"	8'-5"	9'-8"	10'-2"	12'-2"	13'-9"	-
	NI-60	0'-7"	1'-3"	2'-6"	3'-10"	5'-3"	5'-6"	6'-6"	8'-0"	9'-0"	9'-5"	11'-0"	12'-3"	12'-9"	14'-5"	16'-0"	-
	NI-80	0'-7"	0'-8"	0'-8"	1'-8"	3'-3"	3'-8"	4'-9"	6'-5"	7'-5"	8'-0"	9'-10"	11'-3"	11'-9"	13'-9"	15'-4"	-

**Notes:**  
1. Tabulated values are applicable to residential floor construction meeting the above design criteria.  
2. 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 shorter spans; contact your local distributor.

**Design Criteria**

Joist spacing	Up to 24 inches
Loads	Live load = 40 psf and dead load = 15 psf
Deflection limits	L/480 under live load and L/240 under total load

TABLE 6.2 - LOCATION OF DUCT CHASE OPENINGS

Simple span		Minimum distance from inside face of any support to centre of opening (ft.-in.)											
Joist depth	Joist series	Duct chase length (in.)											
		8	10	12	14	16	18	20	22	24			
9-1/2"	NI-20	4'-1"	4'-5"	4'-10"	-	-	-	-	-	-	-	-	-
	NI-40x	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	-	-	-	-	-
	NI-60	5'-4"	5'-9"	6'-2"	6'-7"	7'-1"	7'-5"	8'-0"	-	-	-	-	-
	NI-80	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8'-2"	8'-6"	-	-	-
11-7/8"	NI-20	5'-9"	6'-2"	6'-6"	-	-	-	-	-	-	-	-	-
	NI-40x	6'-8"	7'-2"	7'-6"	8'-1"	8'-6"	9'-1"	9'-6"	-	-	-	-	-
	NI-60	7'-3"	7'-8"	8'-0"	8'-6"	9'-0"	9'-3"	9'-9"	-	-	-	-	-
	NI-80	7'-2"	7'-7"	8'-0"	8'-5"	8'-10"	9'-3"	9'-8"	10'-2"	10'-8"	-	-	-
14"	NI-20	7'-6"	7'-11"	8'-4"	8'-9"	9'-2"	9'-7"	10'-1"	10'-7"	10'-11"	-	-	-
	NI-40x	8'-1"	8'-7"	9'-0"	9'-6"	10'-1"	10'-7"	11'-2"	-	-	-	-	-
	NI-60	8'-9"	9'-3"	9'-8"	10'-11"	10'-6"	11'-1"	11'-6"	-	-	-	-	-
	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7"	11'-1"	11'-6"	12'-1"	12'-6"	-	-	-
16"	NI-20	9'-2"	9'-8"	10'-0"	10'-6"	11'-1"	11'-5"	11'-9"	12'-4"	12'-11"	-	-	-
	NI-40x	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	-	-	-	-	-
	NI-60	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12'-7"	13'-1"	13'-8"	14'-4"	-	-	-
	NI-80	10'-9"	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14'-2"	14'-10"	-	-	-



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 1ST FLR FRAMING  
 Label: B1 - I13268  
 Type: Beam

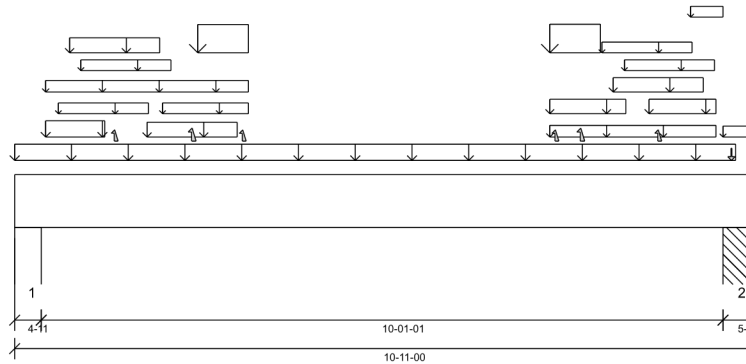
2 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 11/16"
- 615 psi Column @ 10'- 6 3/4"

#### PLY TO PLY CONNECTION:

3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051730 PG 1/2

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 8"	1.25D + 1.5L	1.00	14805 lb ft	23299 lb ft	Passed - 64%
Factored Shear:	1'- 2 3/16"	1.25D + 1.5L	1.00	6212 lb	11052 lb	Passed - 56%
Live Load (LL) Pos. Defl.:	5'- 5"	L		0.274"	L/360	Passed - L/441
Total Load (TL) Pos. Defl.:	5'- 5"	D + L		0.430"	L/240	Passed - L/281
Permanent Deflection:	5'- 4 15/16"			-	L/360	Passed - L/800

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-11	1.25D + 1.5L	1.00	7419 lb		17160 lb	10151 lb	Passed - 73%
2	5-04	1.25D + 1.5L	1.00	6757 lb		19110 lb	11301 lb	Passed - 60%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 11"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'- 5 1/2"	3'- 5 1/2"	10(i3603)	Top	81 lb/ft	-	-	-
Uniform	0'- 5 1/2"	1'- 4"	10(i3603)	Top	153 lb/ft	305 lb/ft	-	-
Uniform	0'- 7 3/4"	1'- 11 3/4"	10(i3603)	Top	0 lb/ft	0 lb/ft	-	-
Uniform	0'- 9 3/4"	2'- 1 3/4"	10(i3603)	Top	144 lb/ft	207 lb/ft	-	-
Uniform	0'- 11 3/4"	2'- 3 3/4"	10(i3603)	Top	0 lb/ft	0 lb/ft	-	-
Uniform	1'- 11 1/2"	3'- 3 1/2"	10(i3603)	Top	102 lb/ft	240 lb/ft	-	-
Uniform	2'- 2 1/4"	3'- 5 1/2"	10(i3603)	Top	0 lb/ft	0 lb/ft	-	-
Uniform	2'- 8 1/2"	3'- 5 1/2"	10(i3603)	Top	476 lb/ft	981 lb/ft	-	-
Uniform	7'- 11"	10'- 4 1/2"	11(i3607)	Top	81 lb/ft	-	-	-
Uniform	7'- 11"	9'- 1/2"	11(i3607)	Top	86 lb/ft	222 lb/ft	-	-
Uniform	7'- 11"	8'- 8"	11(i3607)	Top	483 lb/ft	995 lb/ft	-	-
Uniform	8'- 8 1/4"	10'- 1/4"	11(i3607)	Top	0 lb/ft	0 lb/ft	-	-
Uniform	8'- 10 1/4"	10'- 2 1/4"	11(i3607)	Top	127 lb/ft	177 lb/ft	-	-
Uniform	9'- 1/4"	10'- 4 1/4"	11(i3607)	Top	0 lb/ft	0 lb/ft	-	-
Uniform	9'- 4 5/8"	10'- 4 1/2"	11(i3607)	Top	105 lb/ft	210 lb/ft	-	-
Uniform	10'	10'- 5 3/4"	FC4 Floor Decking (Plan View Fill)	Top	3 lb/ft	6 lb/ft	-	-
Uniform	10'- 5 3/4"	10'- 11"	FC4 Floor Decking (Plan View Fill)	Top	6 lb/ft	11 lb/ft	-	-
Tapered	0'	10'- 8"	Smoothed Load	Top	158 To 157 lb/ft	305 To 301 lb/ft	-	-
Point	1'- 5 3/4"	1'- 5 3/4"	10(i3603)	Top	-	-2 lb	-9 lb	-
Point	2'- 7 1/2"	2'- 7 1/2"	10(i3603)	Top	-	-4 lb	-34 lb	-
Point	3'- 4 1/2"	3'- 4 1/2"	10(i3603)	Top	-	-9 lb	-	-
Point	8'	8'	11(i3607)	Top	-	-10 lb	-	-
Point	8'- 4 1/2"	8'- 4 1/2"	11(i3607)	Top	-	-3 lb	-34 lb	-
Point	9'- 6 1/4"	9'- 6 1/4"	11(i3607)	Top	-	-2 lb	-9 lb	-
Point	10'- 7 1/4"	10'- 7 1/4"	14(i10248)	Top	24 lb	-	-	-


### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 11/16"	W8(i8)	2003 lb	3280/-15 lb	-42 lb	-
2	10'- 5 3/4"	10'- 11"	PBO5(i28)	1802 lb	3000/-15 lb	-44 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Town of Innisfil Certified Model**

	BUILDER:	BAYVIEW WELLINGTON	Job Name:	RL-6C	2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	Status:  Design Passed
	SITE:	ALCONA SHORES	Level:	1ST FLR FRAMING		
	MODEL:	RL-6C	Label:	B1 - i13268		
	CITY:	INNISFIL	Type:	Beam		

**DESIGN NOTES**

- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

**PLY TO PLY CONNECTION**

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.







BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 1ST FLR FRAMING  
Label: B2 - i13607  
Type: Beam

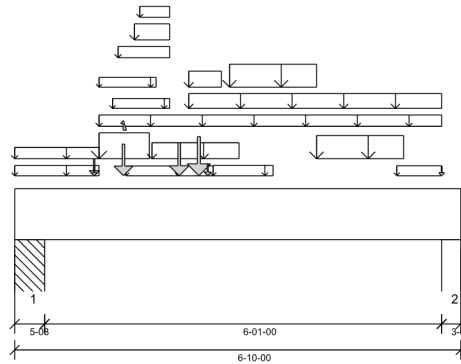
3 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
ABC 2019, OBC 2012 (2019  
Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
must be laterally restrained. Top and bottom edges  
of the member must be fully restrained or have the  
following maximum unbraced length:

Top: 5'- 3 11/16" Bottom: 5'- 3"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 4 1/2"
- 615 psi Wall @ 6'- 7 1/2"

#### PLY TO PLY CONNECTION:

3 ROWS OF 3.25" PNEUMATIC GUN  
NAILS (0.120"x3.25") @ 6" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY  
SUPPORTED BEAM HANGERS ARE FASTENED  
TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051731 PG 1/2

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 9 7/8"	1.25D + 1.5L	1.00	27694 lb ft	34949 lb ft	Passed - 79%
Factored Shear:	1'- 3"	1.25D + 1.5L	1.00	15963 lb	16578 lb	Passed - 96%
Live Load (LL) Pos. Defl.:	3'- 3 9/16"	L		0.099"	L/360	Passed - L/738
Total Load (TL) Pos. Defl.:	3'- 3 11/16"	D + L		0.169"	L/240	Passed - L/431

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08	1.25D + 1.5L	1.00	16158 lb		30030 lb	17758 lb	Passed - 91%
2	3'-08	1.25D + 1.5L	1.00	9314 lb		19110 lb	11304 lb	Passed - 82%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 10"	Self Weight	Top	14 lb/ft	-	-	-
Uniform	-0'	1'- 3 1/2"	14(i10248)	Top	81 lb/ft	-	-	-
Uniform	0'	1'- 3 1/2"	FC4 Floor Decking (Plan View Fill)	Top	8 lb/ft	17 lb/ft	-	-
Uniform	1'- 3 1/2"	6'- 6 1/2"	1(i213)	Top	81 lb/ft	-	-	-
Uniform	1'- 3 1/2"	2'- 2"	1(i213)	Top	1 lb/ft	1 lb/ft	-	-
Uniform	1'- 3 1/2"	2'- 3/4"	1(i213)	Top	261 lb/ft	520 lb/ft	-	-
Uniform	1'- 6"	2'- 4 1/2"	1(i213)	Top	4 lb/ft	8 lb/ft	-	-
Uniform	1'- 7"	2'- 4 1/2"	1(i213)	Top	81 lb/ft	-	-	-
Uniform	1'- 8 1/2"	3'- 1/2"	1(i213)	Top	1 lb/ft	1 lb/ft	-	-
Uniform	1'- 10"	2'- 4 1/2"	1(i213)	Top	102 lb/ft	204 lb/ft	-	-
Uniform	1'- 11"	2'- 4 1/2"	1(i213)	Top	60 lb/ft	-	-	-
Uniform	2'- 1 1/4"	3'- 5 1/4"	1(i213)	Top	102 lb/ft	203 lb/ft	-	-
Uniform	2'- 8"	6'- 6 1/2"	1(i213)	Top	176 lb/ft	70 lb/ft	-	-
Uniform	2'- 8"	3'- 2"	1(i213)	Top	102 lb/ft	204 lb/ft	-	-
Uniform	3'- 1/2"	3'- 11 1/2"	1(i213)	Top	11 lb/ft	23 lb/ft	-	-
Uniform	3'- 3 1/2"	4'- 7 1/2"	1(i213)	Top	211 lb/ft	422 lb/ft	-	-
Uniform	4'- 7 1/2"	5'- 11 1/2"	1(i213)	Top	216 lb/ft	434 lb/ft	-	-
Uniform	5'- 10 1/4"	6'- 6 1/2"	1(i213)	Top	2 lb/ft	4 lb/ft	-	-
Point	1'- 2 5/8"	1'- 2 5/8"	B3(i13489)	Back	386 lb	755 lb	-	-
Point	1'- 2 5/8"	1'- 2 5/8"	FC4 Floor Decking (Plan View Fill)	Top	6 lb	12 lb	-	-
Point	1'- 8"	1'- 8"	1(i213)	Top	1498 lb	2031 lb	-4 lb	-
Point	2'- 6 1/4"	2'- 6 1/4"	1(i213)	Top	1308 lb	2413 lb	-	-
Point	2'- 9 7/8"	2'- 9 7/8"	1(i213)	Top	1950 lb	2751 lb	-	-
Point	2'- 11 1/2"	2'- 11 1/2"	User Load	Top	120 lb	240 lb	-	-
Point	6'- 6 1/2"	6'- 6 1/2"	1(i213)	Top	1 lb	1 lb	-	-


### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	PBO5(i28)	4793 lb	6797 lb	-3 lb	-
2	6'- 6 1/2"	6'- 10"	W15(i34)	2918 lb	3758 lb	-1 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Town of Innisfil Certified Model**

	BUILDER:	BAYVIEW WELLINGTON	Job Name:	RL-6C	3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	Status:  Design Passed
	SITE:	ALCONA SHORES	Level:	1ST FLR FRAMING		
	MODEL:	RL-6C	Label:	B2 - i13607		
	CITY:	INNISFIL	Type:	Beam		

**DESIGN NOTES**

- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

**PLY TO PLY CONNECTION**

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.





BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 1ST FLR FRAMING  
Label: B3 - i13489  
Type: Beam

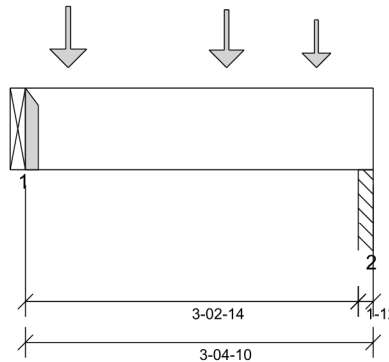
1 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 2 3/4"

#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Column @ 3'- 3 7/8"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 11 1/2"	1.25D + 1.5L	1.00	1346 lb ft	11650 lb ft	Passed - 12%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5L	1.00	1630 lb	5526 lb	Passed - 29%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	1634 lb		2730 lb	-	Passed - 60%
2	1-12	1.25D + 1.5L	1.00	1533 lb		3185 lb	1883 lb	Passed - 81%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HUS1.81/10		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 4 5/8"	Self Weight	Top	5 lb/ft	-	-	-
Point	0'- 5"	0'- 5"	J2(i13739)	Back	282 lb	562 lb	-	-
Point	1'- 11 1/2"	1'- 11 1/2"	J2DJ(i13768)	Back	260 lb	521 lb	-	-
Point	2'- 10"	2'- 10"	J3(i13740)	Back	199 lb	398 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B2(i13607)	386 lb	755 lb	-	-
2	3'- 2 7/8"	3'- 4 5/8"	PBO4(i27)	371 lb	726 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051732





BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C EL B  
 Level: 1ST FLR FRAMING  
 Label: B4 - i13794  
 Type: Beam

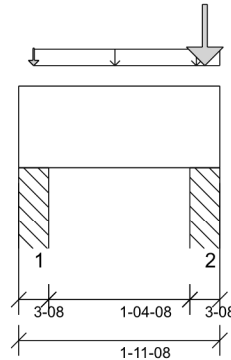
1 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 14:59



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 1'- 6 1/4"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Column @ 1'- 9"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Neg. Moment:	1'- 9"	1.25D + 1.5L	1.00	94 lb ft	11650 lb ft	Passed - 1%
Factored Moment:	1'- 9"	1.25D + 1.5L	1.00	94 lb ft	11650 lb ft	Passed - 1%
Factored Moment:				0 lb ft	0 lb ft	
Factored Moment:				0 lb ft	0 lb ft	
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	62 lb	5526 lb	Passed - 1%
Live Load (LL) Deflection:	1'- 1 1/2"	L		0.000"	L/360	Passed - L/999
Total Load (TL) Deflection:	1'- 1 3/8"	D + L		0.000"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-08	1.4D	0.65	68 lb		4140 lb	2448 lb	Passed - 3%
2	3-08	1.25D + 1.5L	1.00	1584 lb		6370 lb	3767 lb	Passed - 42%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	1'- 11 1/2"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	0'- 1 3/4"	1'- 11 1/2"	FC4 Floor Decking (Plan View Fill)	Top	8 lb/ft	16 lb/ft	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	User Load	Top	50 lb	-	-	-
Point	1'- 9 3/4"	1'- 9 3/4"	User Load	Top	350 lb	700 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO4(i27)	66 lb	13 lb	-	-
2	1'- 8"	1'- 11 1/2"	PBO3(i26)	357 lb	716 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051733

# Town of Innisfil Certified Model



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 1ST FLR FRAMING  
Label: B5 - i13474  
Type: Beam

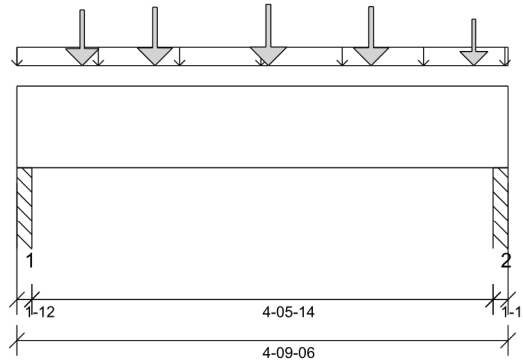
2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



## DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3/4"
- 615 psi Column @ 4'- 8 5/8"

**PLY TO PLY CONNECTION:**  
3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

## ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 5 3/8"	1.25D + 1.5L	1.00	2226 lb ft	23299 lb ft	Passed - 10%
Factored Shear:	0'- 11 1/4"	1.25D + 1.5L	1.00	1771 lb	11052 lb	Passed - 16%
Total Load (TL) Pos. Defl.:	2'- 4 9/16"	D + L		0.013"	L/240	Passed - L/999

## SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	1852 lb		6370 lb	3767 lb	Passed - 49%
2	1-12	1.25D + 1.5L	1.00	1831 lb		6370 lb	3767 lb	Passed - 49%

## SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 9 3/8"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'	4'- 9 3/8"	User Load	Top	60 lb/ft	-	-	-
Point	0'- 7 5/8"	0'- 7 5/8"	J2(i13741)	Back	152 lb	304 lb	-	-
Point	1'- 4 1/8"	1'- 4 1/8"	J1DJ(i13767)	Back	162 lb	325 lb	-	-
Point	2'- 5 3/8"	2'- 5 3/8"	J1(i13777)	Back	173 lb	346 lb	-	-
Point	3'- 5 3/8"	3'- 5 3/8"	J1(i13778)	Back	164 lb	329 lb	-	-
Point	4'- 5 3/8"	4'- 5 3/8"	J1(i13779)	Back	117 lb	235 lb	-	-

## UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 1 3/4"	PBO3(i26)	535 lb	746 lb	-	-
2	4'- 7 5/8"	4'- 9 3/8"	PBO2(i25)	565 lb	793 lb	-	-

## DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

## PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051734



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 1ST FLR FRAMING  
 Label: B6 - i13279  
 Type: Beam

1 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

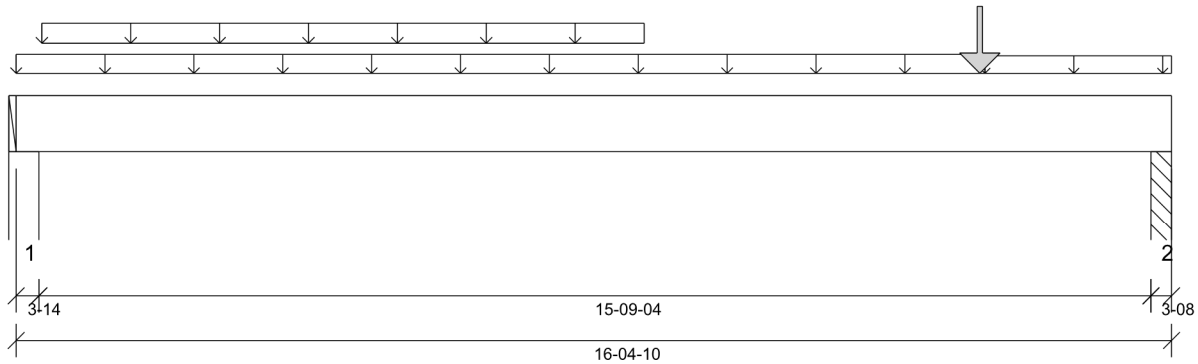
Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 13'- 3 1/4"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Column @ 16'- 2 1/8"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 8 1/16"	1.25D + 1.5L	0.98	4886 lb ft	11374 lb ft	Passed - 43%
Factored Shear:	15'- 3 5/8"	1.25D + 1.5L	0.98	1611 lb	5395 lb	Passed - 30%
Live Load (LL) Pos. Defl.:	8'- 8 7/8"	L		0.313"	L/360	Passed - L/603
Total Load (TL) Pos. Defl.:	8'- 4 11/16"	D + L		0.703"	L/240	Passed - L/269
Permanent Deflection:	8'- 1 7/16"			-	L/360	Passed - L/499

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-14	1.4D	0.65	792 lb		4584 lb	2712 lb	Passed - 29%
2	3-08	1.25D + 1.5L	0.98	1640 lb		6219 lb	3678 lb	Passed - 45%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	16'- 4 5/8"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	0'	13'- 8 7/8"	FC4 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Uniform	0'- 4 3/8"	8'- 10 7/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	13'- 8 7/8"	16'- 4 5/8"	FC4 Floor Decking (Plan View Fill)	Top	5 lb/ft	10 lb/ft	-	-
Point	13'- 8"	13'- 8"	B9(i13468)	Back	296 lb	577 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 7/8"	W37(i10039)	566 lb	307 lb	-	-
2	16'- 1 1/8"	16'- 4 5/8"	PBO2(i25)	517 lb	665 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
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- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051735





BUILDER: **BAYVIEW WELLINGTON**  
 SITE: **ALCONA SHORES**  
 MODEL: **RL-6C**  
 CITY: **INNISFIL**

Job Name: **RL-6C**  
 Level: **1ST FLR FRAMING**  
 Label: **B7 - i13369**  
 Type: **Beam**

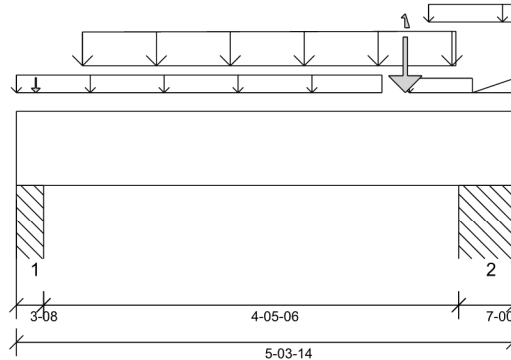
**3 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Beam @ 4'- 9 7/8"

**PLY TO PLY CONNECTION:**  
**3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C**  
 NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051736

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 2"	1.25D + 1.5L	1.00	9567 lb ft	34949 lb ft	Passed - 27%
Factored Shear:	3'- 11 3/8"	1.25D + 1.5L	1.00	10398 lb	16578 lb	Passed - 63%
Live Load (LL) Pos. Defl.:	2'- 9 1/4"	L		0.018"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 9 1/8"	D + L		0.030"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-08	1.25D + 1.5L	1.00	3983 lb		19110 lb	11301 lb	Passed - 35%
2	7-00	1.25D + 1.5L	1.00	14748 lb		38220 lb	22601 lb	Passed - 65%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 3 7/8"	Self Weight	Top	14 lb/ft	-	-	-
Uniform	-0'	3'- 11"	9(i1768)	Top	81 lb/ft	-	-	-
Uniform	4'- 2 1/2"	4'- 10 5/8"	FC4 Floor Decking (Plan View Fill)	Top	4 lb/ft	9 lb/ft	-	-
Uniform	4'- 5"	5'- 3 7/8"	H3(i215)	Top	81 lb/ft	-	-	-
Tapered	0'- 8 1/2"	4'- 8 1/2"	Smoothed Load	Back	142 To 148 lb/ft	286 To 296 lb/ft	-	-
Tapered	4'- 10 5/8"	5'- 3 7/8"	FC4 Floor Decking (Plan View Fill)	Top	0 To 0 lb/ft	0 To 1 lb/ft	-	-
Point	0'- 2 1/2"	0'- 2 1/2"	J3(i13725)	Back	93 lb	186 lb	-	-
Point	4'- 2"	4'- 2"	PBO12(i1776)	Top	4251 lb	6635 lb	-29 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO1(i24)	1437 lb	2047 lb	-6 lb	-
2	4'- 8 7/8"	5'- 3 7/8"	-	3959 lb	5944 lb	-23 lb	-
++>	4'- 9 5/8"	4'- 9 5/8"	PBO13(i2894)	990 lb	1486 lb	-6 lb	-
++>	5'- 1 1/4"	5'- 1 1/4"	STL BM(i13)	2969 lb	4458 lb	-17 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- User loads assume a bearing length of 3.5" in determining member capacity for loads near supports.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 2. Required Load Area: L=3.500", W=5.250". LDF=1.00, Pf=15266 lb, Qr=19110 lb, Result=79.89%.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



**BUILDER:** BAYVIEW WELLINGTON  
**SITE:** ALCONA SHORES  
**MODEL:** RL-6C  
**CITY:** INNISFIL

**Job Name:** RL-6C  
**Level:** 1ST FLR FRAMING  
**Label:** B8 - i13286  
**Type:** Beam

**1 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

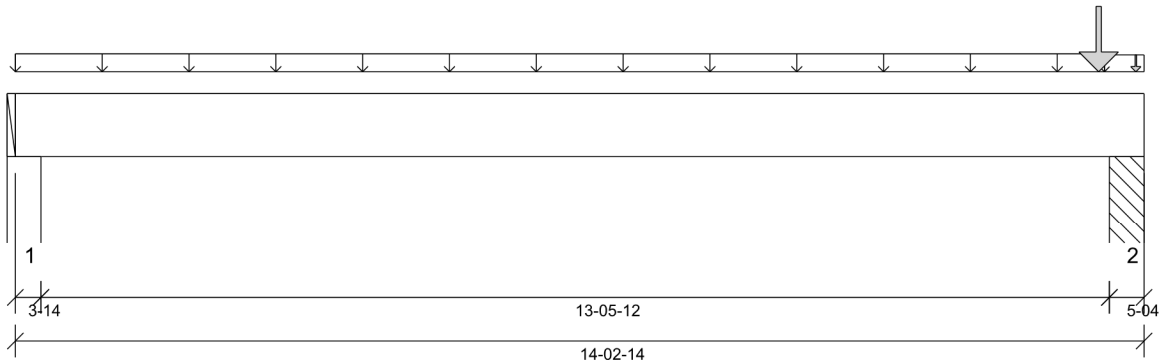
**Status:**  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:57



### DESIGN INFORMATION

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
**Design Methodology:** LSD  
**Service Condition:** Dry  
**LL Deflection Limit:** L/360,  
**TL Deflection Limit:** L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 13'- 3 1/4"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Column @ 13'- 10 5/8"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 5 5/8"	1.25D + 1.5L	1.00	1263 lb ft	11650 lb ft	Passed - 11%
Factored Shear:	13'- 1/8"	1.25D + 1.5L	1.00	1513 lb	5526 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	7'- 2 3/8"	L		0.075"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 2 3/16"	D + L		0.127"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3'-14"	1.25D + 1.5L	1.00	366 lb		7053 lb	4172 lb	Passed - 9%
2	5'-04"	1.25D + 1.5L	1.00	1574 lb		9555 lb	5650 lb	Passed - 28%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	14'- 2 7/8"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	0'	13'- 8 7/8"	FC4 Floor Decking (Plan View Fill)	Top	10 lb/ft	20 lb/ft	-	-
Uniform	13'- 8 7/8"	14'- 2 7/8"	FC4 Floor Decking (Plan View Fill)	Top	3 lb/ft	7 lb/ft	-	-
Point	13'- 8"	13'- 8"	B9(i13468)	Front	299 lb	581 lb	-	-
Point	14'- 1 5/8"	14'- 1 5/8"	9(i1768)	Top	12 lb	-	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 7/8"	W37(i10039)	104 lb	142 lb	-	-
2	13'- 9 5/8"	14'- 2 7/8"	PBO1(i24)	414 lb	719 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051737



BUILDER: **BAYVIEW WELLINGTON**  
 SITE: **ALCONA SHORES**  
 MODEL: **RL-6C**  
 CITY: **INNISFIL**

Job Name: **RL-6C**  
 Level: **1ST FLR FRAMING**  
 Label: **B9 - i13468**  
 Type: **Beam**

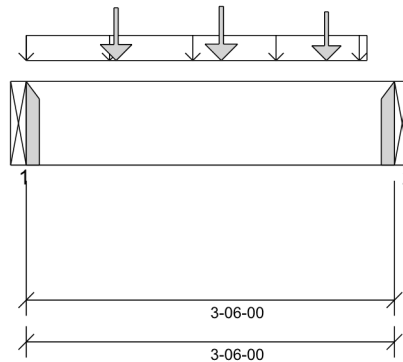
**1 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 3'- 6"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 10 1/4"	1.25D + 1.5L	1.00	1293 lb ft	11650 lb ft	Passed - 11%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5L	1.00	1034 lb	5526 lb	Passed - 19%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	1240 lb		2730 lb	-	Passed - 45%
2	1-08	1.25D + 1.5L	1.00	1241 lb		2730 lb	-	Passed - 45%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HUS1.81/10		-	-	-	Connector manually specified by the user.
2	HUS1.81/10		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 6"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	0'	3'- 2 7/8"	User Load	Top	60 lb/ft	120 lb/ft	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	J3(i13722)	Back	131 lb	263 lb	-	-
Point	1'- 10 1/4"	1'- 10 1/4"	J3(i13723)	Back	136 lb	273 lb	-	-
Point	2'- 10 1/4"	2'- 10 1/4"	J3(i13724)	Back	117 lb	234 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B6(i13279)	296 lb	577 lb	-	-
2	3'- 6"	3'- 6"	B8(i13286)	299 lb	581 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051738





BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 1ST FLR FRAMING  
 Label: B10L - i13486  
 Type: Beam

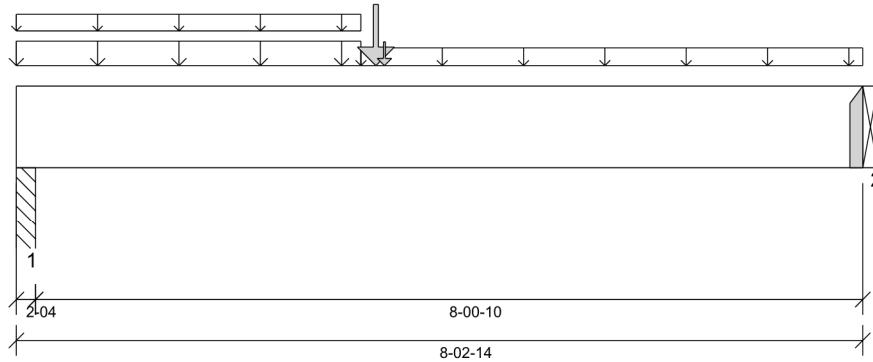
2 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 4'- 7 1/8"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 1 1/4"
- 615 psi Beam @ 8'- 2 7/8"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 6"	1.25D + 1.5L	1.00	12508 lb ft	23299 lb ft	Passed - 54%
Factored Shear:	0'- 11 3/4"	1.25D + 1.5L	1.00	3933 lb	11052 lb	Passed - 36%
Live Load (LL) Pos. Defl.:	3'- 11 5/8"	L		0.113"	L/360	Passed - L/857
Total Load (TL) Pos. Defl.:	3'- 11 11/16"	D + L		0.178"	L/240	Passed - L/543

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	2-04	1.25D + 1.5L	1.00	4235 lb		8190 lb	4843 lb	Passed - 87%
2	1-08	1.25D + 1.5L	1.00	2854 lb		5460 lb	-	Passed - 52%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Top	Face	Member	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
2	HGUS410		-	-	-				Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	8'- 2 7/8"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'	3'- 4 1/4"	User Load	Top	60 lb/ft	120 lb/ft	-	-
Uniform	0'	3'- 4 1/4"	FC2 Floor Decking (Plan View Fill)	Top	8 lb/ft	17 lb/ft	-	-
Uniform	3'- 4 1/4"	8'- 2 7/8"	FC2 Floor Decking (Plan View Fill)	Top	16 lb/ft	32 lb/ft	-	-
Point	3'- 6"	3'- 6"	B12L(i13460)	Back	1223 lb	2171 lb	-	-
Point	3'- 7"	3'- 7"	13(i9041)	Top	233 lb	393 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 1/4"	PBO8(i37)	1124 lb	1960 lb	-	-
2	8'- 2 7/8"	8'- 2 7/8"	B11L(i13301)	722 lb	1227 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051739



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 1ST FLR FRAMING  
 Label: B11L - i13301  
 Type: Beam

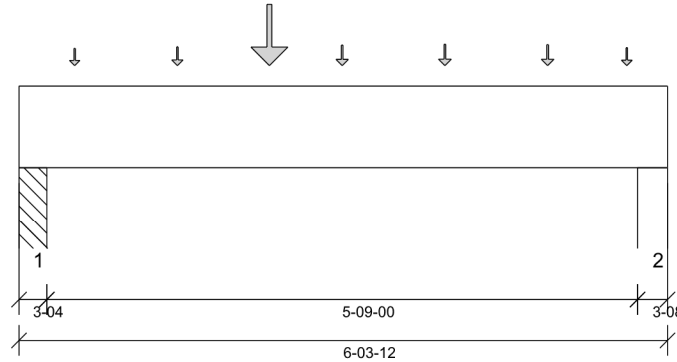
1 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0'- 5 1/4" Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/4"
- 615 psi Wall @ 6'- 1 1/4"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 5 1/4"	1.25D + 1.5L	1.00	4808 lb ft	11650 lb ft	Passed - 41%
Factored Shear:	1'- 3/4"	1.25D + 1.5L	1.00	2318 lb	5526 lb	Passed - 42%
Live Load (LL) Pos. Defl.:	3'- 5/16"	L		0.049"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 1/4"	D + L		0.076"	L/240	Passed - L/902

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-04	1.25D + 1.5L	1.00	2324 lb		5915 lb	3498 lb	Passed - 66%
2	3-08	1.25D + 1.5L	1.00	1955 lb		6370 lb	3768 lb	Passed - 52%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 3 3/4"	Self Weight	Top	5 lb/ft	-	-	-
Point	0'- 6 1/2"	0'- 6 1/2"	J7(i13624)	Front	27 lb	54 lb	-	-
Point	1'- 6 1/2"	1'- 6 1/2"	J7(i13625)	Front	49 lb	98 lb	-	-
Point	2'- 5 1/4"	2'- 5 1/4"	B10L(i13486)	Front	722 lb	1227 lb	-	-
Point	3'- 1 3/4"	3'- 1 3/4"	J5(i13626)	Front	74 lb	148 lb	-	-
Point	4'- 1 3/4"	4'- 1 3/4"	J5(i13651)	Front	85 lb	171 lb	-	-
Point	5'- 1 3/4"	5'- 1 3/4"	J5(i13628)	Front	80 lb	160 lb	-	-
Point	5'- 11"	5'- 11"	J5(i13629)	Front	37 lb	75 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/4"	PBO6(i35)	604 lb	1043 lb	-	-
2	6'- 1/4"	6'- 3 3/4"	W14(i30)	500 lb	890 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
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- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051740



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 1ST FLR FRAMING  
Label: B12L - i13460  
Type: Beam

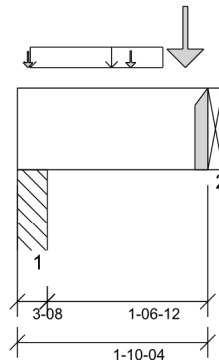
2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Beam @ 1'- 10 1/4"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 7 5/8"	1.25D + 1.5L	1.00	1218 lb ft	23299 lb ft	Passed - 5%
Factored Shear:	1'- 3/4"	1.25D + 1.5L	1.00	924 lb	11052 lb	Passed - 8%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-08	1.25D + 1.5L	1.00	1176 lb		12740 lb	7534 lb	Passed - 16%
2	1-09	1.25D + 1.5L	1.00	5578 lb		5578 lb	-	Passed - 100%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories		
			Top	Face	Member			
2	HGUS410		-	-	-	Connector manually specified by the user.		

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	1'- 10 1/4"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'- 1 1/2"	1'- 5"	4(i214)	Top	101 lb/ft	-	-	-
Point	0'- 1 1/4"	0'- 1 1/4"	J7(i13624)	Back	29 lb	57 lb	-	-
Point	1'- 1 1/4"	1'- 1 1/4"	J7(i13625)	Back	52 lb	104 lb	-	-
Point	1'- 7 5/8"	1'- 7 5/8"	13(i9041)	Top	1543 lb	2865 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO7(i36)	549 lb	855 lb	-	-
2	1'- 10 1/4"	1'- 10 1/4"	B10L(i13486)	1223 lb	2171 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051741



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 1ST FLR FRAMING  
Label: B13L - i13379  
Type: Beam

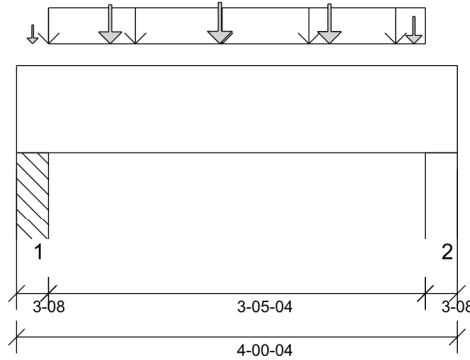
1 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Wall @ 3'- 9 3/4"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 10 1/4"	1.25D + 1.5L	1.00	1430 lb ft	11650 lb ft	Passed - 12%
Factored Shear:	2'- 11 1/4"	1.25D + 1.5L	1.00	1387 lb	5526 lb	Passed - 25%
Total Load (TL) Pos. Defl.:	2'- 1/8"	D + L		0.010"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-08	1.25D + 1.5L	1.00	1491 lb		6370 lb	3767 lb	Passed - 40%
2	3-08	1.25D + 1.5L	1.00	1512 lb		6370 lb	3768 lb	Passed - 40%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 1/4"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	0'- 3 1/2"	3'- 8 3/4"	User Load	Front	120 lb/ft	240 lb/ft	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	J5(i13626)	Back	77 lb	154 lb	-	-
Point	1'- 10 1/4"	1'- 10 1/4"	J5(i13651)	Back	85 lb	171 lb	-	-
Point	2'- 10 1/4"	2'- 10 1/4"	J5(i13628)	Back	80 lb	160 lb	-	-
Point	3'- 7 1/2"	3'- 7 1/2"	J5(i13629)	Back	37 lb	75 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	User Load	Top	9 lb	18 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO8(i37)	355 lb	692 lb	-	-
2	3'- 8 3/4"	4'- 1/4"	W14(i30)	364 lb	710 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051742





BUILDER: **BAYVIEW WELLINGTON**  
 SITE: **ALCONA SHORES**  
 MODEL: **RL-6C**  
 CITY: **INNISFIL**

Job Name: **RL-6C**  
 Level: **1ST FLR FRAMING**  
 Label: **B14L - i13288**  
 Type: **Beam**

**1 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

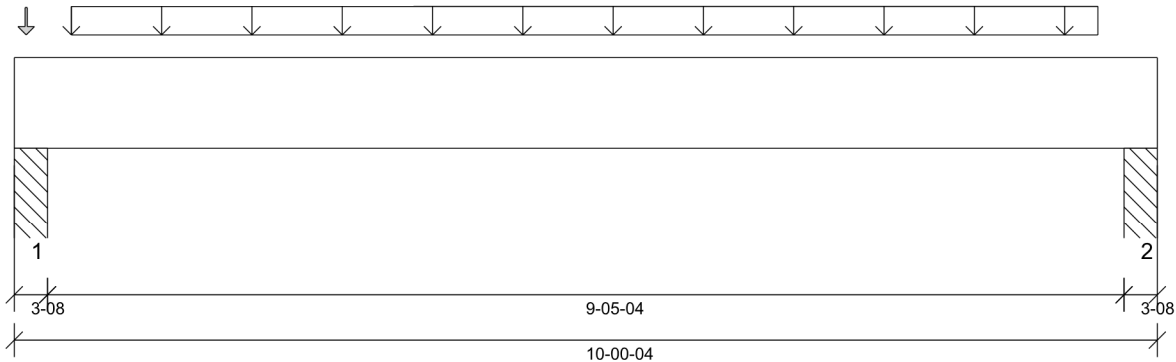
Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Column @ 9'- 9 3/4"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'	1.25D + 1.5L	1.00	3399 lb ft	11650 lb ft	Passed - 29%
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	1322 lb	5526 lb	Passed - 24%
Live Load (LL) Pos. Defl.:	5'- 1/8"	L		0.106"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 1/8"	D + L		0.163"	L/240	Passed - L/693

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-08	1.25D + 1.5L	1.00	1472 lb		6370 lb	3767 lb	Passed - 39%
2	3-08	1.25D + 1.5L	1.00	1322 lb		6370 lb	3767 lb	Passed - 35%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 1/4"	Self Weight	Top	5 lb/ft	-	-	-
Tapered	0'- 6"	9'- 6"	Smoothed Load	Front	68 lb/ft	134 To 136 lb/ft	-	-
Point	0'- 1 1/4"	0'- 1 1/4"	J6(i13649)	Front	34 lb	68 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO9(i41)	365 lb	678 lb	-	-
2	9'- 8 3/4"	10'- 1/4"	PBO10(i42)	328 lb	607 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051743



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 1ST FLR FRAMING  
 Label: B15L - i13285  
 Type: Beam

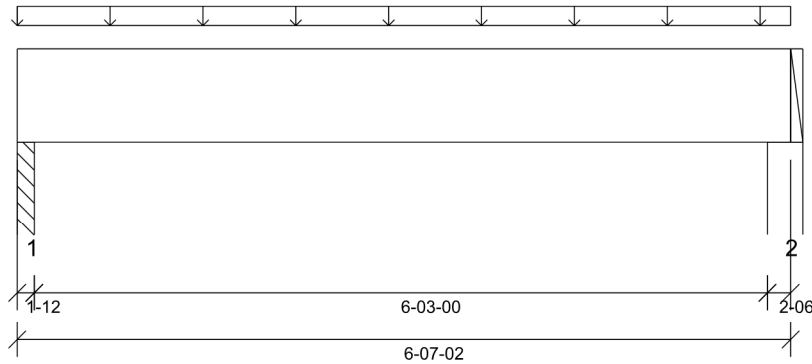
1 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 6'- 4 3/4"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3/4"
- 615 psi Wall @ 6'- 5 3/4"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 3 1/4"	1.25D + 1.5L	1.00	253 lb ft	11650 lb ft	Passed - 2%
Factored Shear:	5'- 7 1/4"	1.25D + 1.5L	1.00	115 lb	5526 lb	Passed - 2%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	168 lb		3185 lb	1883 lb	Passed - 9%
2	2-06	1.25D + 1.5L	1.00	168 lb		4322 lb	2557 lb	Passed - 7%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 7 1/8"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	0'	6'- 7 1/8"	FC1 Floor Decking (Plan View Fill)	Top	10 lb/ft	20 lb/ft	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 1 3/4"	PBO10(i42)	50 lb	70 lb	-	-
2	6'- 4 3/4"	6'- 7 1/8"	W16(i40)	51 lb	70 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051744



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 3RD FLR FRAMING  
 Label: B27 - i13668  
 Type: Beam

2 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

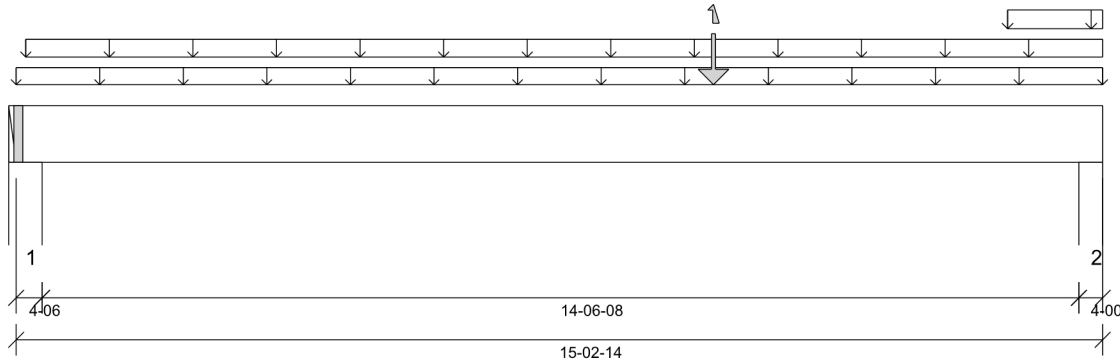
Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:57



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 9'- 3 1/4"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 14'- 11 7/8"

**PLY TO PLY CONNECTION:**  
 3 ROWS OF 3.25" PNEUMATIC GUN  
 NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY  
 SUPPORTED BEAM HANGERS ARE FASTENED  
 TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051745

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	9'- 4 3/4"	1.25D + 1.5L	1.00	4384 lb ft	23299 lb ft	Passed - 19%
Factored Shear:	14'- 1 3/8"	1.25D + 1.5L	1.00	1031 lb	11052 lb	Passed - 9%
Live Load (LL) Pos. Defl.:	7'- 9 7/8"	L		0.139"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 10 1/16"	D + L		0.243"	L/240	Passed - L/716

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-06	1.25D + 1.5L	1.00	989 lb		15925 lb	9420 lb	Passed - 10%
2	4-00	1.25D + 1.5L	1.00	1234 lb		14560 lb	8613 lb	Passed - 14%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	15'- 2 7/8"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'	15'- 2 7/8"	FC6 Floor Decking (Plan View Fill)	Top	9 lb/ft	18 lb/ft	-	-
Uniform	0'- 1 5/8"	15'- 2 7/8"	FC6 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Uniform	13'- 10 7/8"	15'- 2 7/8"	User Load	Top	60 lb/ft	-	-	-
Point	9'- 9 3/8"	9'- 9 3/8"	B28(i13275)	Back	165 lb	207 lb	-35 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 3/8"	E47(i3745)	301 lb	409 lb	-12 lb	-
2	14'- 10 7/8"	15'- 2 7/8"	12(i6371)	424 lb	470 lb	-23 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 3RD FLR FRAMING  
 Label: B37 - i13458  
 Type: Beam

3 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

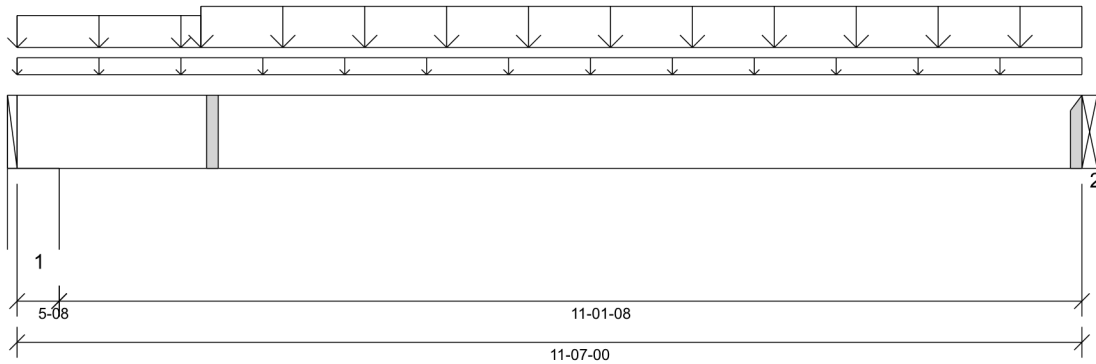
Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 9'- 3"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Beam @ 11'- 7"

**PLY TO PLY CONNECTION:**  
 3 ROWS OF 3.25" PNEUMATIC GUN  
 NAILS (0.120"x3.25") @ 8" O/C  
 NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY  
 SUPPORTED BEAM HANGERS ARE FASTENED  
 TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051746

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 1/4"	1.25D + 1.5S + L	1.00	11633 lb ft	34949 lb ft	Passed - 33%
Factored Shear:	10'- 9 1/2"	1.25D + 1.5S + L	1.00	3587 lb	16578 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	5'- 11 7/8"	S + 0.5L		0.154"	L/360	Passed - L/867
Total Load (TL) Pos. Defl.:	5'- 11 15/16"	D + S + 0.5L		0.255"	L/240	Passed - L/522

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5S + L	1.00	4049 lb		30030 lb	17764 lb	Passed - 23%
2	1-08	1.25D + 1.5S + L	1.00	4183 lb		8190 lb	-	Passed - 51%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	HGUS5.50/10		-	-	-	Connector manually specified by the user.
* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.						

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	11'- 7"	Self Weight	Top	14 lb/ft	-	-	-
Uniform	-0'	11'- 7"	FC6 Floor Decking (Plan View Fill)	Top	10 lb/ft	20 lb/ft	-	-
Uniform	-0'	2'	User Load	Back	84 lb/ft	-	239 lb/ft	-
Uniform	2'	11'- 7"	E61(i4304)	Top	190 lb/ft	-	310 lb/ft	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	E67(i6759)	1060 lb	117 lb	1687 lb	-
2	11'- 7"	11'- 7"	B40(i13703)	1205 lb	110 lb	1762 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.





BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 3RD FLR FRAMING  
Label: B31 - i13255  
Type: Beam

3 Ply Member  
1 3/4" x 11 7/8" (2.0E 3100)  
WestFraser LVL

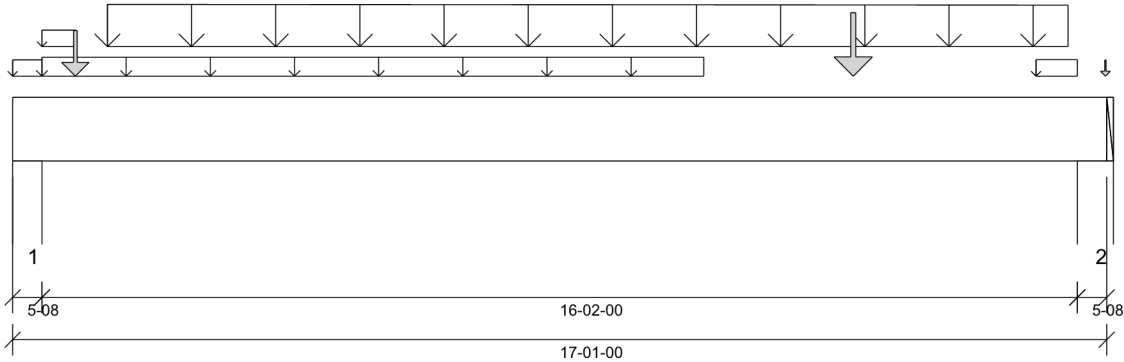
Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
Top: 0'  
Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 1334 psi Wall @ 0'- 4 1/2"
- 1334 psi Wall @ 16'- 8 1/2"

**PLY TO PLY CONNECTION:**  
3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C  
NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051747

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 11 3/4"	1.25D + 1.5L	1.00	27871 lb ft	53017 lb ft	Passed - 53%
Factored Shear:	15'- 7 5/8"	1.25D + 1.5L	1.00	6771 lb	20723 lb	Passed - 33%
Live Load (LL) Pos. Defl.:	8'- 7 1/2"	L		0.404"	L/360	Passed - L/479
Total Load (TL) Pos. Defl.:	8'- 7 1/16"	D + L		0.675"	L/240	Passed - L/287
Permanent Deflection:	8'- 6 7/16"			-	L/360	Passed - L/738

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	6570 lb		30030 lb	38531 lb	Passed - 22%
2	5-08	1.25D + 1.5L	1.00	6825 lb		30030 lb	38531 lb	Passed - 23%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	17'- 1"	Self Weight	Top	18 lb/ft	-	-	-
Uniform	0'	0'- 5 1/2"	FC6 Floor Decking (Plan View Fill)	Top	3 lb/ft	7 lb/ft	-	-
Uniform	0'- 5 1/2"	10'- 9 1/2"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 5 1/2"	0'- 11 3/4"	FC6 Floor Decking (Plan View Fill)	Top	4 lb/ft	9 lb/ft	-	-
Uniform	15'- 11 3/4"	16'- 7 1/2"	FC6 Floor Decking (Plan View Fill)	Top	4 lb/ft	9 lb/ft	-	-
Tapered	1'- 5 3/4"	16'- 5 3/4"	Smoothed Load	Back	167 To 162 lb/ft	333 To 324 lb/ft	-	-
Point	13'- 1 1/2"	13'- 1 1/2"	User Load	Front	250 lb	500 lb	-	-
Point	0'- 11 3/4"	0'- 11 3/4"	J4(i13682)	Back	156 lb	313 lb	-	-
Point	17'- 3/4"	17'- 3/4"	FC6 Floor Decking (Plan View Fill)	Top	2 lb	5 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	8(i1265)	1950 lb	2751 lb	-	-
2	16'- 7 1/2"	17'- 1"	12(i6371)	1857 lb	3006 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 3RD FLR FRAMING  
Label: B28 - i13275  
Type: Beam

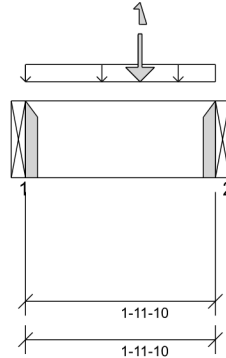
2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1"

#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 1'- 11 5/8"

#### PLY TO PLY CONNECTION:

3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 4" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051748

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 2 1/4"	1.25D + 1.5L	1.00	552 lb ft	23299 lb ft	Passed - 2%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5L	1.00	448 lb	11052 lb	Passed - 4%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	517 lb		5460 lb	-	Passed - 9%
2	1-08	1.25D + 1.5L	1.00	741 lb		5460 lb	-	Passed - 14%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HGUS410		-	-	-	Connector manually specified by the user.
2	HGUS410		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	1'- 11 5/8"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'	1'- 11 5/8"	User Load	Top	60 lb/ft	-	-	-
Point	1'- 2 1/4"	1'- 2 1/4"	J3(i13693)	Front	126 lb	251 lb	-	-
Point	1'- 2 1/4"	1'- 2 1/4"	J3(i13638)	Back	118 lb	270 lb	-89 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B27(i13668)	165 lb	207 lb	-35 lb	-
2	1'- 11 5/8"	1'- 11 5/8"	STLBM()	216 lb	314 lb	-54 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 3RD FLR FRAMING  
 Label: B40 - i13703  
 Type: Beam

4 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

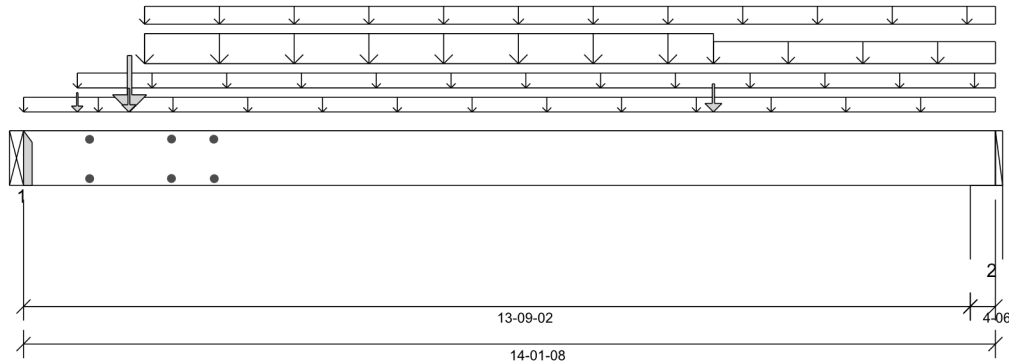
Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 12'

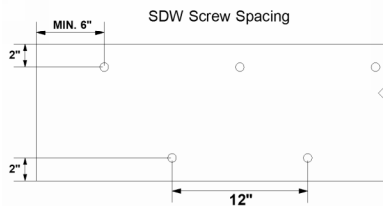
#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Wall @ 13'- 10 1/8"

#### PLY TO PLY CONNECTION: 2 STAGGERED ROWS OF SDW22634 SCREWS @ 12" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

(EXCEPT FOR AREAS COVERED BY  
 CONCENTRATED LOAD FASTENING)



\*\*SEE CONCENTRATED LOAD  
 FASTENING ON PAGE 2\*\*



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051749 PG 1/2

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 6 1/8"	1.25D + 1.5S + L	1.00	21230 lb ft	46599 lb ft	Passed - 46%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5S + L	1.00	8801 lb	22105 lb	Passed - 40%
Live Load (LL) Pos. Defl.:	6'- 9 11/16"	S + 0.5L		0.336"	L/360	Passed - L/491
Total Load (TL) Pos. Defl.:	6'- 9 1/2"	D + S + 0.5L		0.552"	L/240	Passed - L/299
Permanent Deflection:	6'- 9 1/4"			-	L/360	Passed - L/788

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5S + L	1.00	8839 lb		10920 lb	-	Passed - 81%
2	4-06	1.25D + 1.5S + L	1.00	5395 lb		31850 lb	18840 lb	Passed - 29%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories		
			Top	Face	Member			
1	HGUS7.25/10		-	-	-	Connector manually specified by the user.		

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	14'- 1 1/2"	Self Weight	Top	19 lb/ft	-	-	-
Uniform	0'	14'- 1 1/2"	FC6 Floor Decking (Plan View Fill)	Top	4 lb/ft	8 lb/ft	-	-
Uniform	0'- 9 3/8"	14'- 1 1/2"	FC6 Floor Decking (Plan View Fill)	Top	6 lb/ft	12 lb/ft	-	-
Uniform	1'- 9 1/8"	14'- 1 1/2"	E65(i6564)	Top	81 lb/ft	-	-	-
Uniform	1'- 9 1/8"	10'- 5/16"	E65(i6564)	Top	81 lb/ft	-	260 lb/ft	-
Uniform	10'- 5/16"	14'- 1 1/2"	E65(i6564)	Top	36 lb/ft	-	132 lb/ft	-
Point	0'- 9 3/8"	0'- 9 3/8"	J3(i13408)	Back	134 lb	227 lb	19 lb	-
Point	1'- 6 1/2"	1'- 6 1/2"	B37(i13458)	Back	1205 lb	110 lb	1762 lb	-
Point	1'- 6 3/8"	1'- 6 3/8"	E61(i4304)	Top	198 lb	-	495 lb	-
Point	10'- 5/16"	10'- 5/16"	E65(i6564)	Top	244 lb	-	777 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	STLBM()	2445 lb	442 lb	3506 lb	-
2	13'- 9 1/8"	14'- 1 1/2"	E11(i1258)	1560 lb	173 lb	2238 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



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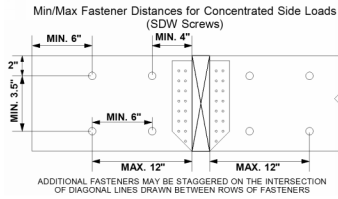
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 SITE: **ALCONA SHORES**  
 MODEL: **RL-6C**  
 CITY: **INNISFIL**

Job Name: **RL-6C**  
 Level: **3RD FLR FRAMING**  
 Label: **B40 - i13703**  
 Type: **Beam**

**4 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

Status:  
**Design Passed**

FASTEN 6 SDW22634 SCREWS @  
 BEAM B37 AS PER SPACING  
 DIAGRAM BELOW  
 INSTALL FROM LOADED FACE



**PLY TO PLY CONNECTION**

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.







BUILDER: **BAYVIEW WELLINGTON**  
 SITE: **ALCONA SHORES**  
 MODEL: **RL-6C**  
 CITY: **INNISFIL**

Job Name: **RL-6C**  
 Level: **2ND FLR FRAMING**  
 Label: **B19 - i13274**  
 Type: **Beam**

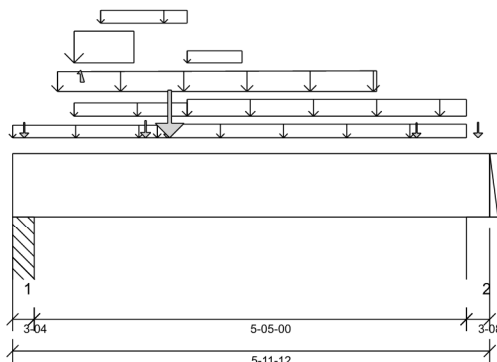
**3 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 8 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/4"
- 615 psi Wall @ 5'- 9 1/4"

#### PLY TO PLY CONNECTION:

**3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C**  
 NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 11 5/8"	1.25D + 1.5L	1.00	14020 lb ft	34949 lb ft	Passed - 40%
Factored Shear:	1'- 3/4"	1.25D + 1.5L	1.00	8529 lb	16578 lb	Passed - 51%
Live Load (LL) Pos. Defl.:	2'- 9 11/16"	L		0.040"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 9 3/4"	D + L		0.069"	L/240	Passed - L/948

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-04	1.25D + 1.5L	1.00	9788 lb		17745 lb	10493 lb	Passed - 93%
2	3-08	1.25D + 1.5L	1.00	6470 lb		19110 lb	11304 lb	Passed - 57%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 11 3/4"	Self Weight	Top	14 lb/ft	-	-	-
Uniform	0'	1'- 9 3/4"	FC5 Floor Decking (Plan View Fill)	Top	12 lb/ft	23 lb/ft	-	-
Uniform	0'- 9 1/4"	2'- 2 1/4"	12(i6371)	Top	81 lb/ft	-	-	-
Uniform	0'- 9 1/4"	1'- 6 1/4"	12(i6371)	Top	565 lb/ft	626 lb/ft	-	-
Uniform	1'- 1 1/4"	2'- 2 1/4"	12(i6371)	Top	60 lb/ft	-	-	-
Uniform	1'- 9 3/4"	5'- 8 1/4"	User Load	Front	35 lb/ft	70 lb/ft	-	-
Uniform	2'- 2 1/4"	5'- 8 1/4"	7(i1264)	Top	194 lb/ft	101 lb/ft	-	-
Uniform	2'- 2 1/4"	2'- 10 1/2"	7(i1264)	Top	3 lb/ft	7 lb/ft	-	-
Tapered	0'- 6 3/4"	4'- 6 3/4"	Smoothed Load	Back	159 To 175 lb/ft	320 To 349 lb/ft	-	-
Point	1'- 8"	1'- 8"	B22A(i13315)	Front	258 lb	482 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	J4(i13507)	Back	159 lb	319 lb	-	-
Point	5'- 3/4"	5'- 3/4"	J4(i13512)	Back	143 lb	286 lb	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	12(i6371)	Top	-	-	-23 lb	-
Point	1'- 11 1/4"	1'- 11 1/4"	FC5 Floor Decking (Plan View Fill)	Top	1 lb	2 lb	-	-
Point	1'- 11 5/8"	1'- 11 5/8"	12(i6371)	Top	1857 lb	3006 lb	-	-
Point	5'- 10"	5'- 10"	E23(i1263)	Top	491 lb	9 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/4"	PBO12(i1776)	2894 lb	4271 lb	-21 lb	-
2	5'- 8 1/4"	5'- 11 3/4"	E80(i10312)	2210 lb	2314 lb	-2 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION



**Town of Innisfil Certified Model**



2023-08-02 3:13:22 PM jpenfold

BUILDER: **BAYVIEW WELLINGTON**  
SITE: **ALCONA SHORES**  
MODEL: **RL-6C**  
CITY: **INNISFIL**

Job Name: **RL-6C**  
Level: **2ND FLR FRAMING**  
Label: **B19 - i13274**  
Type: **Beam**

**3 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

Status:  
**Design  
Passed**

**PLY TO PLY CONNECTION**

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.





**BUILDER:** BAYVIEW WELLINGTON  
**SITE:** ALCONA SHORES  
**MODEL:** RL-6C  
**CITY:** INNISFIL

**Job Name:** RL-6C  
**Level:** 2ND FLR FRAMING  
**Label:** B20 - i13481  
**Type:** Beam

**3 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

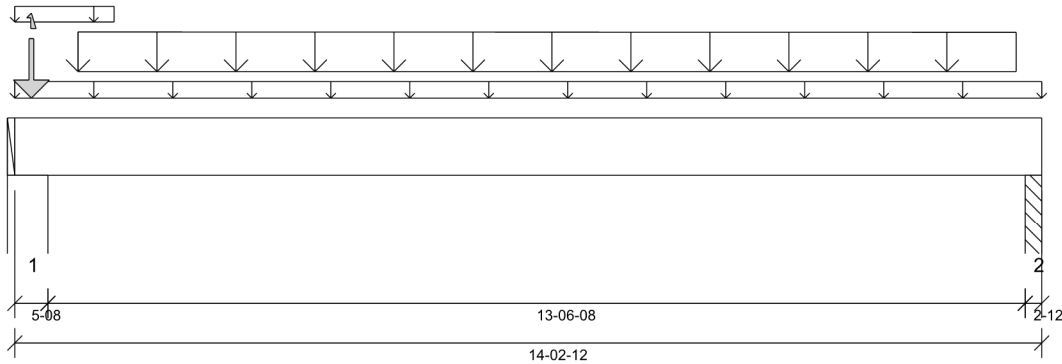
**Status:**  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:58



### DESIGN INFORMATION

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
**Design Methodology:** LSD  
**Service Condition:** Dry  
**LL Deflection Limit:** L/360,  
**TL Deflection Limit:** L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 0'- 9 1/4"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Column @ 14'- 1"

**PLY TO PLY CONNECTION:**  
**3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C**  
 NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051751

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 4 1/2"	1.25D + 1.5L	1.00	18151 lb ft	34949 lb ft	Passed - 52%
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5S	0.65	120 lb ft	22717 lb ft	Passed - 1%
Factored Shear:	13'- 2 1/2"	1.25D + 1.5L	1.00	5081 lb	16578 lb	Passed - 31%
Live Load (LL) Pos. Defl.:	7'- 2 13/16"	L		0.387"	L/360	Passed - L/420
Total Load (TL) Pos. Defl.:	7'- 2 13/16"	D + L		0.595"	L/240	Passed - L/273
Permanent Deflection:	7'- 2 13/16"			-	L/360	Passed - L/805

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L + S	1.00	5873 lb		30030 lb	17764 lb	Passed - 33%
2	2-12	1.25D + 1.5L	1.00	5150 lb		15015 lb	8879 lb	Passed - 58%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	14'- 2 3/4"	Self Weight	Top	14 lb/ft	-	-	-
Uniform	-0'	14'- 2 3/4"	FC5 Floor Decking (Plan View Fill)	Top	12 lb/ft	23 lb/ft	-	-
Uniform	-0'	1'- 4 1/2"	FC5 Floor Decking (Plan View Fill)	Top	6 lb/ft	11 lb/ft	-	-
Tapered Point	0'- 10 1/2"	13'- 10 1/2"	Smoothed Load	Back	167 To 165 lb/ft	335 To 330 lb/ft	-	-
	0'- 2 3/4"	0'- 2 3/4"	E47(i3745)	Top	270 lb	134 lb	321/-12 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	E29(i3550)	1530 lb	2438 lb	317 lb	-
2	14'	14'- 2 3/4"	PBO12(i1776)	1276 lb	2364 lb	-8 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 2ND FLR FRAMING  
Label: B22A - i13315  
Type: Beam

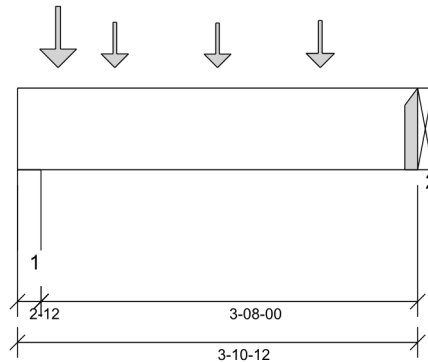
2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 10 1/8"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 1 3/4"
- 615 psi Beam @ 3'- 10 3/4"

**PLY TO PLY CONNECTION:**  
3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 4" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051752

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 11 3/8"	1.25D + 1.5L	1.00	1417 lb ft	23299 lb ft	Passed - 6%
Factored Shear:	3'- 1 1/4"	1.25D + 1.5L	1.00	1107 lb	11052 lb	Passed - 10%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	2-12	1.25D + 1.5L	1.00	2100 lb		10010 lb	5921 lb	Passed - 35%
2	1-08	1.25D + 1.5L	1.00	1117 lb		5460 lb	-	Passed - 20%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	HGUS410		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 10 3/4"	Self Weight	Top	9 lb/ft	-	-	-
Point	0'- 4 3/4"	0'- 4 3/4"	User Load	Front	250 lb	500 lb	-	-
Point	0'- 11 3/8"	0'- 11 3/8"	J1(i13542)	Back	164 lb	327 lb	-	-
Point	1'- 11 3/8"	1'- 11 3/8"	J1(i13541)	Back	159 lb	319 lb	-	-
Point	2'- 11 3/8"	2'- 11 3/8"	J1(i13540)	Back	173 lb	346 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 3/4"	13(i9041)	524 lb	1010 lb	-	-
2	3'- 10 3/4"	3'- 10 3/4"	B19(i13274)	258 lb	482 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.





BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 2ND FLR FRAMING  
 Label: B32 - i13683  
 Type: Beam

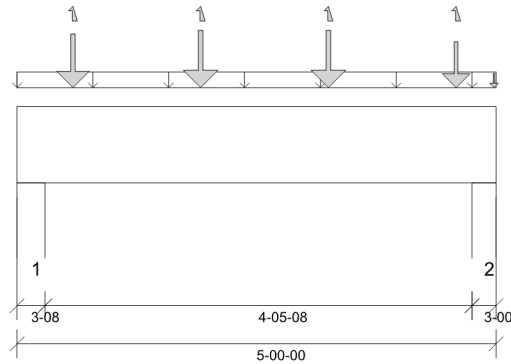
2 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 1/2"
- 615 psi Wall @ 4'- 10"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 11"	1.25D + 1.5L	1.00	1650 lb ft	23299 lb ft	Passed - 7%
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	1072 lb	11052 lb	Passed - 10%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-08	1.25D + 1.5L	1.00	1581 lb		12740 lb	7536 lb	Passed - 21%
2	3-00	1.25D + 1.5L	1.00	1541 lb		10911 lb	6454 lb	Passed - 24%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'	5'	FC5 Floor Decking (Plan View Fill)	Top	9 lb/ft	18 lb/ft	-	-
Point	0'- 7"	0'- 7"	J1(i13544)	Back	155 lb	350/-5 lb	-	-
Point	1'- 11"	1'- 11"	J1(i13671)	Back	172 lb	379/-5 lb	-	-
Point	3'- 3"	3'- 3"	J1(i13659)	Back	172 lb	379/-5 lb	-	-
Point	4'- 7"	4'- 7"	J1(i13547)	Back	125 lb	279/-4 lb	-	-
Point	4'- 11 3/4"	4'- 11 3/4"	FC5 Floor Decking (Plan View Fill)	Top	0 lb	0 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	10(i3603)	357 lb	736/-9 lb	-	-
2	4'- 9"	5'	11(i3607)	362 lb	746/-10 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051753



2023-08-02 3:13:23 PM jpenfold

BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 2ND FLR FRAMING  
Label: B33 - i13611  
Type: Beam

2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

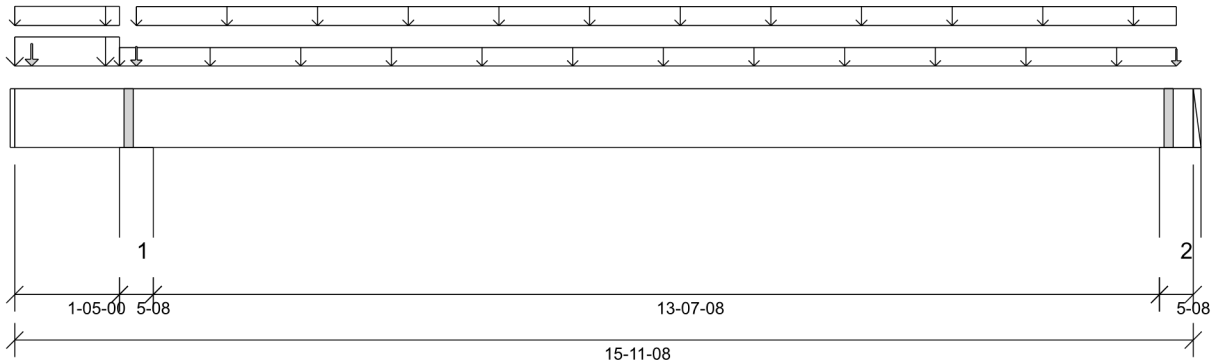
Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
Top: 0' Bottom: 13'- 7 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 1'- 7 3/4"
- 615 psi Wall @ 15'- 7"

#### PLY TO PLY CONNECTION:

3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 10 3/16"	1.25D + 1.5L	0.95	2154 lb ft	22185 lb ft	Passed - 10%
Factored Neg. Moment:	1'- 7 3/4"	1.25D + 1.5S + L	0.67	548 lb ft	14484 lb ft	Passed - 4%
Factored Shear:	2'- 8"	1.25D + 1.5L	0.95	588 lb	10524 lb	Passed - 6%
Live Load (LL) Pos. Defl.:	8'- 7 3/8"	L		0.068"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 8 1/2"	D + L		0.108"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5S + L	0.67	878 lb		13504 lb	7988 lb	Passed - 11%
2	5-08	1.25D + 1.5L	0.95	657 lb		19062 lb	11276 lb	Passed - 6%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	15'- 11 1/2"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	-0'	1'- 5"	E36(i3696)	Top	130 lb/ft	-	80 lb/ft	-
Uniform	0'	1'- 5"	FC5 Floor Decking (Plan View Fill)	Top	13 lb/ft	26 lb/ft	-	-
Uniform	1'- 5"	15'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Top	8 lb/ft	16 lb/ft	-	-
Uniform	1'- 7 3/4"	15'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Top	11 lb/ft	23 lb/ft	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	FC5 Floor Decking (Plan View Fill)	Top	32 lb	-	20 lb	-
Point	1'- 7 3/4"	1'- 7 3/4"	E35(i3695)	Top	24 lb	-	-	-
Point	15'- 8 3/4"	15'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Top	0 lb	0 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	1'- 5"	1'- 10 1/2"	E27(i3551)	496 lb	316 lb	143 lb	-
2	15'- 6"	15'- 11 1/2"	10(i3603)	192 lb	276/-2 lb	-9 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 1/4" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051754



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 2ND FLR FRAMING  
Label: B34 - i13473  
Type: Beam

2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

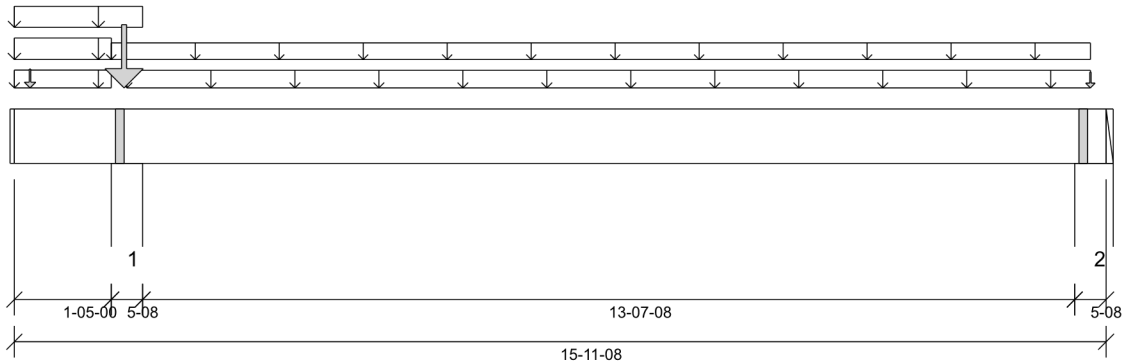
Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 12:58



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
ABC 2019, OBC 2012 (2019  
Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
must be laterally restrained. Top and bottom edges  
of the member must be fully restrained or have the  
following maximum unbraced length:

Top: 0' Bottom: 13'- 7 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 1'- 7 3/4"
- 615 psi Wall @ 15'- 7"

**PLY TO PLY CONNECTION:**  
3 ROWS OF 3.25" PNEUMATIC GUN  
NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY  
SUPPORTED BEAM HANGERS ARE FASTENED  
TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051755 PG 1/2

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 10 7/8"	1.25D + 1.5L	0.80	1851 lb ft	18643 lb ft	Passed - 10%
Factored Neg. Moment:	1'- 7 3/4"	1.25D + 1.5S + L	0.75	595 lb ft	15813 lb ft	Passed - 4%
Factored Shear:	2'- 8"	1.25D + 1.5L	0.80	518 lb	8843 lb	Passed - 6%
Live Load (LL) Pos. Defl.:	8'- 7 3/8"	L		0.059"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 8 13/16"	D + L		0.093"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L + S	0.71	1820 lb		14133 lb	8360 lb	Passed - 22%
2	5-08	1.25D + 1.5L	0.80	570 lb		16019 lb	9476 lb	Passed - 6%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	15'- 11 1/2"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'	1'- 10 1/2"	E38(i3690)	Top	100 lb/ft	-	-	-
Uniform	0'	1'- 5"	E38(i3690)	Top	30 lb/ft	-	80 lb/ft	-
Uniform	-0'	1'- 5"	FC5 Floor Decking (Plan View Fill)	Top	13 lb/ft	26 lb/ft	-	-
Uniform	1'- 5"	15'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Top	5 lb/ft	11 lb/ft	-	-
Uniform	1'- 7 3/4"	15'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Top	11 lb/ft	23 lb/ft	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	FC5 Floor Decking (Plan View Fill)	Top	33 lb	-	20 lb	-
Point	1'- 7 1/4"	1'- 7 1/4"	E38(i3690)	Top	516 lb	117 lb	167 lb	-
Point	15'- 8 3/4"	15'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Top	0 lb	0 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	1'- 5"	1'- 10 1/2"	E27(i3551)	1018 lb	393 lb	310 lb	-
2	15'- 6"	15'- 11 1/2"	11(i3607)	169 lb	236/-2 lb	-9 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 1/4" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

# Town of Innisfil Certified Model



2023-08-02 3:13:23 PM jpenfold

BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 2ND FLR FRAMING  
Label: B34 - i13473  
Type: Beam

2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

Status:  
Design  
Passed

## PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.







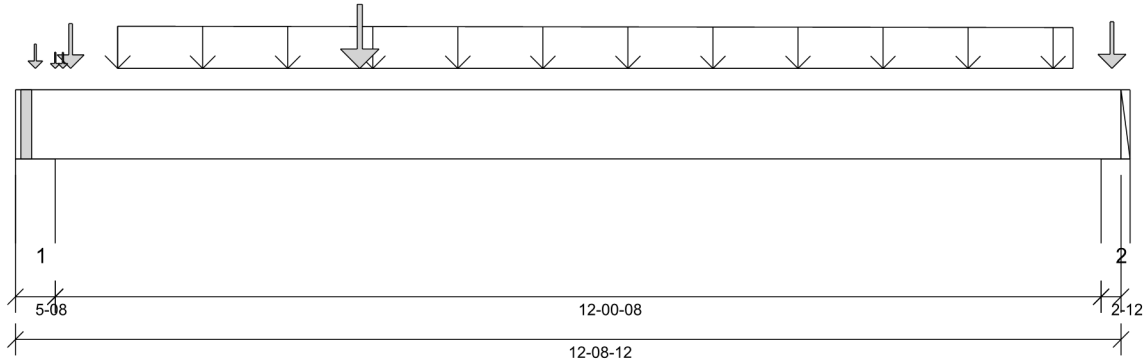
BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 2ND FLR FRAMING  
 Label: B22 - i13298  
 Type: Beam

**2 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15 Report Version: 2021.03.26 05/25/2023 12:58



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 12'- 7"

#### PLY TO PLY CONNECTION:

3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051756

#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 8 1/8"	1.25D + 1.5L	1.00	14782 lb ft	23299 lb ft	Passed - 63%
Factored Shear:	1'- 3"	1.25D + 1.5L	1.00	5051 lb	11052 lb	Passed - 46%
Live Load (LL) Pos. Defl.:	6'- 4 11/16"	L		0.380"	L/360	Passed - L/380
Total Load (TL) Pos. Defl.:	6'- 4 11/16"	D + L		0.578"	L/240	Passed - L/249
Permanent Deflection:	6'- 4 3/4"			-	L/360	Passed - L/749

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	5251 lb		20020 lb	11843 lb	Passed - 44%
2	2-12	1.25D + 1.5L	1.00	4909 lb		10010 lb	5921 lb	Passed - 83%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 8 3/4"	Self Weight	Top	9 lb/ft	-	-	-
Tapered	1'- 2 1/8"	12'- 2 1/8"	Smoothed Load	Back	163 To 155 lb/ft	327 To 311 lb/ft	-	-
Point	3'- 11 9/16"	3'- 11 9/16"	User Load	Front	250 lb	500 lb	-	-
Point	0'- 7 5/8"	0'- 7 5/8"	J4(i13685)	Back	150 lb	299 lb	-	-
Point	12'- 7 1/2"	12'- 7 1/2"	J1(i13534)	Back	159 lb	319 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	8(i1265)	Top	71 lb	60 lb	-	-
Point	0'- 5 1/2"	0'- 5 1/2"	FC5 Floor Decking (Plan View Fill)	Top	1 lb	2 lb	-	-
Point	0'- 6 9/16"	0'- 6 9/16"	FC5 Floor Decking (Plan View Fill)	Top	1 lb	1 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	1(i213)	1308 lb	2413 lb	-	-
2	12'- 6"	12'- 8 3/4"	13(i9041)	1193 lb	2276 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 3RD FLR FRAMING  
 Label: B30 - i11592  
 Type: Beam

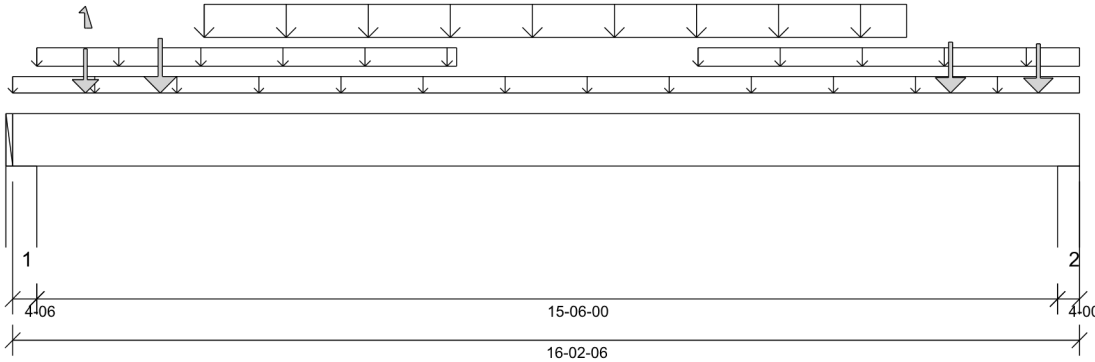
3 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:29



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 15'- 11 3/8"

**PLY TO PLY CONNECTION:**  
 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C  
 NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 6 7/8"	1.25D + 1.5L	1.00	17687 lb ft	34949 lb ft	Passed - 51%
Factored Shear:	15'- 7/8"	1.25D + 1.5L	1.00	4455 lb	16578 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	8'- 1 5/16"	L		0.486"	L/360	Passed - L/382
Total Load (TL) Pos. Defl.:	8'- 1 1/4"	D + L		0.764"	L/240	Passed - L/243
Permanent Deflection:	8'- 1 1/8"			-	L/360	Passed - L/688

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-06	1.25D + 1.5L	1.00	4433 lb		23888 lb	14130 lb	Passed - 31%
2	4-00	1.25D + 1.5L	1.00	4593 lb		21840 lb	12919 lb	Passed - 36%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	16'- 2 3/8"	Self Weight	Top	14 lb/ft	-	-	-
Uniform	0'	16'- 2 3/8"	FC6 Floor Decking (Plan View Fill)	Top	6 lb/ft	15 lb/ft	-	-
Uniform	0'- 4 3/8"	6'- 8 7/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	2'- 10 7/8"	13'- 6 7/8"	Smoothed Load	Front	93 lb/ft	249 lb/ft	-	-
Uniform	10'- 4 7/8"	16'- 2 3/8"	User Load	Top	60 lb/ft	-	-	-
Point	1'- 1 1/4"	1'- 1 1/4"	J3(i11491)	Front	65 lb	244 lb	-70 lb	-
Point	2'- 2 7/8"	2'- 2 7/8"	J2(i11458)	Front	115 lb	307 lb	-	-
Point	14'- 2 7/8"	14'- 2 7/8"	J3(i11573)	Front	104 lb	278 lb	-	-
Point	15'- 6 7/8"	15'- 6 7/8"	J3(i11576)	Front	99 lb	265 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 3/8"	E39(i3688)	1186 lb	1963 lb	-66 lb	-
2	15'- 10 3/8"	16'- 2 3/8"	8(i1265)	1242 lb	2031 lb	-4 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051757



BUILDER: BAYVIEW WELLINGTON  
SITE: ALCONA SHORES  
MODEL: RL-6C  
CITY: INNISFIL

Job Name: RL-6C  
Level: 1ST FLR FRAMING  
Label: B41 - i10576  
Type: Beam

2 Ply Member  
1 3/4" x 9 1/2" (2.0E 3100)  
WestFraser LVL

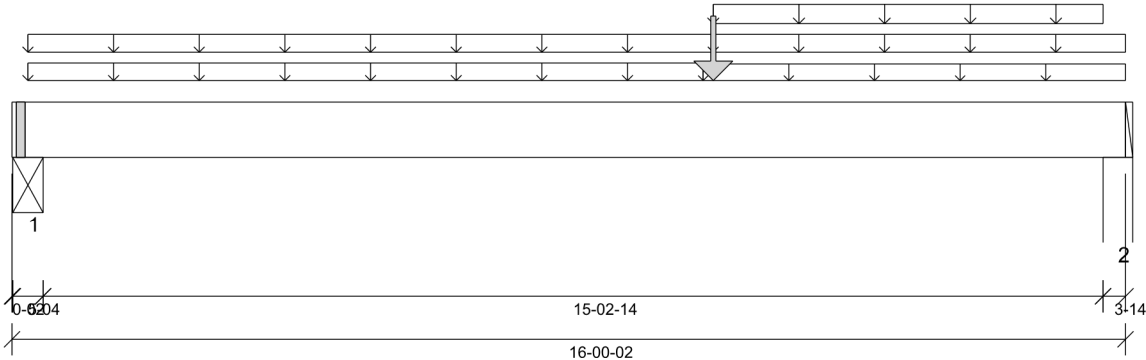
Status:  
Design  
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 13:00



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
Top: 0' Bottom: 9'- 5 7/8"

#### Factored Resistance of Support Material:

- 534 psi Beam @ 0'- 4 3/8"
- 615 psi Wall @ 15'- 9 1/4"

**PLY TO PLY CONNECTION:**  
3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
DWG # TF23051758

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	10'- 1"	1.25D + 1.5L	0.98	9950 lb ft	22813 lb ft	Passed - 44%
Factored Shear:	14'- 10 3/4"	1.25D + 1.5L	0.98	2032 lb	10822 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	8'- 5"	L		0.273"	L/360	Passed - L/669
Total Load (TL) Pos. Defl.:	8'- 5 5/8"	D + L		0.551"	L/240	Passed - L/331
Permanent Deflection:	8'- 6 5/16"			-	L/360	Passed - L/678

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-04	1.25D + 1.5L	0.98	1510 lb		18711 lb	9607 lb	Passed - 16%
2	3-14	1.25D + 1.5L	0.98	2174 lb		13811 lb	8169 lb	Passed - 27%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	16'- 1/8"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'- 2 3/4"	16'- 1/8"	FC4 Floor Decking (Plan View Fill)	Top	10 lb/ft	21 lb/ft	-	-
Uniform	0'- 2 3/4"	9'- 11 1/4"	FC4 Floor Decking (Plan View Fill)	Top	10 lb/ft	19 lb/ft	-	-
Uniform	9'- 11 1/4"	16'- 1/8"	FC4 Floor Decking (Plan View Fill)	Top	3 lb/ft	6 lb/ft	-	-
Uniform	10'- 1"	15'- 8 1/4"	User Load	Top	60 lb/ft	-	-	-
Point	10'- 1"	10'- 1"	B42(i10577)	Back	646 lb	728 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'- 1/8"	0'- 5 3/8"	STL BM(i13)	533 lb	573 lb	-	-
2	15'- 8 1/4"	16'- 1/8"	W45(i10492)	877 lb	708 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.





2023-08-02 3:13:24 PM jpenfold

BUILDER: BAYVIEW WELLINGTON  
 SITE: ALCONA SHORES  
 MODEL: RL-6C  
 CITY: INNISFIL

Job Name: RL-6C  
 Level: 1ST FLR FRAMING  
 Label: B42 - i10577  
 Type: Beam

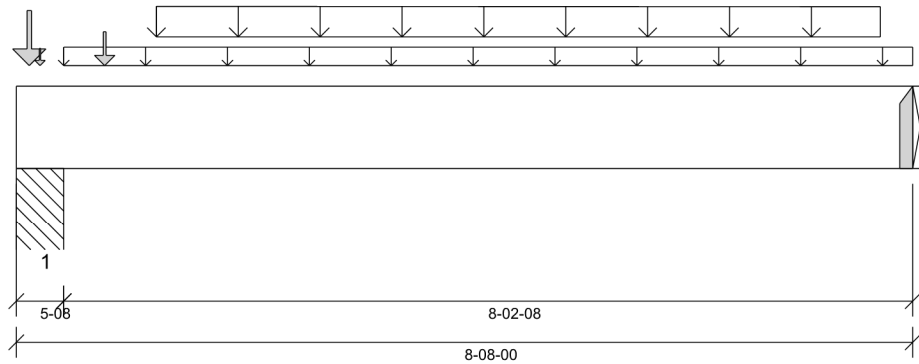
2 Ply Member  
 1 3/4" x 9 1/2" (2.0E 3100)  
 WestFraser LVL

Status:  
 Design  
 Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 13:00



## DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
 ABC 2019, OBC 2012 (2019  
 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

**Lateral Restraint Requirements:**

Both ends of the member and the outer supports  
 must be laterally restrained. Top and bottom edges  
 of the member must be fully restrained or have the  
 following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

**Factored Resistance of Support Material:**

- 615 psi Column @ 0'- 4 1/2"
- 615 psi Beam @ 8'- 8"

**PLY TO PLY CONNECTION:**  
 3 ROWS OF 3.25" PNEUMATIC GUN  
 NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY  
 SUPPORTED BEAM HANGERS ARE FASTENED  
 TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051759

## ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 10 1/4"	1.25D + 1.5L	1.00	4200 lb ft	23299 lb ft	Passed - 18%
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5L	1.00	152 lb ft	23299 lb ft	Passed - 1%
Factored Shear:	7'- 10 1/2"	1.25D + 1.5L	1.00	1840 lb	11052 lb	Passed - 17%
Live Load (LL) Pos. Defl.:	4'- 6 7/16"	L		0.041"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 6 7/16"	D + L		0.077"	L/240	Passed - L/999

## SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	2586 lb		20021 lb	11839 lb	Passed - 22%
2	1-08	1.25D + 1.5L	1.00	1909 lb		5460 lb	-	Passed - 35%

## CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories		
			Top	Face	Member			
2	HGUS410		-	-	-	Connector manually specified by the user.		

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

## SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	8'- 8"	Self Weight	Top	9 lb/ft	-	-	-
Uniform	0'- 5 1/2"	8'- 8"	User Load	Top	60 lb/ft	-	-	-
Tapered	1'- 4 1/4"	8'- 4 1/4"	Smoothed Load	Front	98 To 96 lb/ft	196 To 191 lb/ft	-	-
Point	0'- 1 1/2"	0'- 1 1/2"	J4(i10471)	Front	209 lb	220 lb	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	J5(i10468)	Front	67 lb	133 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E33(i3549)	Top	20 lb	-	-	-

## UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	PBO16(i10566)	901 lb	979 lb	-	-
2	8'- 8"	8'- 8"	B41(i10576)	646 lb	728 lb	-	-

## DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

## PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.





BUILDER: **BAYVIEW WELLINGTON**  
 SITE: **ALCONA SHORES**  
 MODEL: **RL-6C**  
 CITY: **INNISFIL**

Job Name: **RL-6C**  
 Level: **1ST FLR FRAMING**  
 Label: **B43L - i10571**  
 Type: **Beam**

**1 Ply Member**  
**1 3/4" x 9 1/2" (2.0E 3100)**  
**WestFraser LVL**

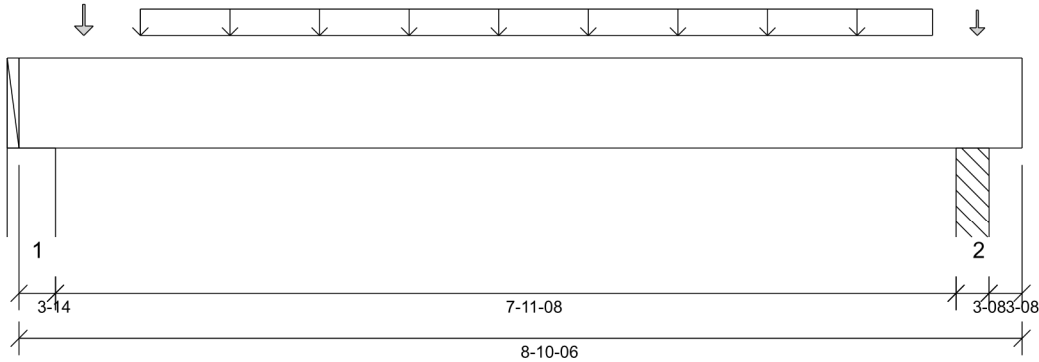
Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26

05/25/2023 13:00



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0'- 3 1/2" Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Column @ 8'- 5 1/8"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 6 7/8"	1.25D + 1.5L	1.00	2084 lb ft	11650 lb ft	Passed - 18%
Factored Shear:	1'- 1 3/8"	1.25D + 1.5L	1.00	1010 lb	5526 lb	Passed - 18%
Live Load (LL) Pos. Defl.:	4'- 4"	L		0.047"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 4"	D + L		0.073"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-14	1.25D + 1.5L	1.00	1016 lb		7052 lb	4172 lb	Passed - 24%
2	3-08	1.25D + 1.5L	1.00	1054 lb		6370 lb	3767 lb	Passed - 28%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	8'- 10 3/8"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	1'- 7/8"	8'- 7/8"	Smoothed Load	Back	57 lb/ft	114 lb/ft	-	-
Point	0'- 6 7/8"	0'- 6 7/8"	J7(i10574)	Back	47 lb	95 lb	-	-
Point	8'- 5 5/8"	8'- 5 5/8"	J7(i10532)	Back	28 lb	57 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 7/8"	W30(i3103)	253 lb	467 lb	-	-
2	8'- 3 3/8"	8'- 6 7/8"	PBO15(i10533)	263 lb	483 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY  
 DWG # TF23051760

# NORDIC

## STRUCTURES

### Maximum Floor Spans – S2.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued oriented strand board (OSB) sheathing

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	16'-0"	-
11-7/8"	NI-20	17'-0"	16'-0"	15'-6"	-	17'-6"	16'-7"	16'-0"	-
	NI-40x	18'-2"	17'-1"	16'-6"	-	18'-9"	17'-6"	16'-11"	-
	NI-60	18'-5"	17'-3"	16'-8"	-	19'-0"	17'-8"	17'-1"	-
	NI-80	19'-9"	18'-3"	17'-7"	-	20'-4"	18'-10"	18'-0"	-
	NI-90	20'-2"	18'-8"	17'-10"	-	20'-9"	19'-2"	18'-4"	-
14"	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
	NI-80	21'-11"	20'-3"	19'-4"	-	22'-7"	20'-11"	20'-0"	-
	NI-90	22'-5"	20'-8"	19'-9"	-	23'-0"	21'-4"	20'-4"	-
16"	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
	NI-60	18'-2"	17'-1"	16'-4"	-	18'-8"	17'-4"	16'-4"	-
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-
11-7/8"	NI-20	19'-7"	18'-2"	17'-3"	-	19'-11"	18'-3"	17'-3"	-
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-2"	-
	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
14"	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	21'-8"	-
	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
16"	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	-

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

# NORDIC

## STRUCTURES

### Maximum Floor Spans – S4.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued oriented strand board (OSB) sheathing

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	15'-2"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"	16'-0"	15'-4"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-11"	16'-11"	16'-3"	15'-8"	18'-7"	17'-5"	16'-10"	16'-2"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-6"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-80	21'-1"	19'-6"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90	21'-6"	19'-10"	18'-11"	17'-11"	22'-0"	20'-4"	19'-5"	18'-4"
14"	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90	23'-10"	22'-1"	21'-0"	19'-10"	24'-5"	22'-7"	21'-6"	20'-4"
16"	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"
	NI-80	25'-6"	23'-7"	22'-5"	21'-2"	26'-2"	24'-3"	23'-1"	21'-10"
	NI-90	26'-0"	24'-0"	22'-10"	21'-6"	26'-7"	24'-8"	23'-5"	22'-2"

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
	NI-60	22'-1"	20'-7"	19'-8"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-80	23'-8"	22'-0"	20'-11"	19'-10"	24'-1"	22'-6"	21'-6"	20'-0"
	NI-90	24'-1"	22'-5"	21'-4"	20'-2"	24'-7"	22'-11"	21'-10"	20'-7"
14"	NI-40x	24'-5"	22'-9"	21'-9"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"
	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-80	26'-6"	24'-8"	23'-6"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90	27'-0"	25'-1"	23'-11"	22'-7"	27'-6"	25'-8"	24'-6"	23'-2"
16"	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-80	29'-1"	27'-1"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90	29'-7"	27'-6"	26'-2"	24'-9"	30'-2"	28'-2"	26'-10"	25'-5"

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

# NORDIC

## STRUCTURES

### Maximum Floor Spans – S6.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued Canadian softwood plywood

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
	NI-60	16'-1"	15'-2"	14'-8"	-	16'-6"	15'-7"	15'-1"	-
	NI-80	17'-1"	16'-1"	15'-6"	-	17'-5"	16'-5"	15'-10"	-
11-7/8"	NI-20	16'-9"	15'-10"	15'-4"	-	17'-4"	16'-4"	15'-10"	-
	NI-40x	17'-10"	16'-10"	16'-3"	-	18'-6"	17'-4"	16'-9"	-
	NI-60	18'-1"	17'-0"	16'-5"	-	18'-9"	17'-6"	16'-11"	-
	NI-80	19'-6"	18'-0"	17'-4"	-	20'-1"	18'-7"	17'-9"	-
	NI-90	19'-11"	18'-4"	17'-8"	-	20'-5"	18'-11"	18'-1"	-
14"	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
	NI-80	21'-8"	20'-0"	19'-1"	-	22'-4"	20'-8"	19'-9"	-
	NI-90	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-0"	20'-1"	-
16"	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
	NI-80	23'-7"	21'-10"	20'-10"	-	24'-4"	22'-6"	21'-6"	-
	NI-90	24'-1"	22'-2"	21'-2"	-	24'-9"	22'-11"	21'-10"	-

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-
	NI-40x	17'-9"	16'-10"	15'-11"	-	18'-2"	16'-11"	15'-11"	-
	NI-60	17'-11"	16'-11"	16'-2"	-	18'-5"	17'-2"	16'-2"	-
	NI-80	19'-3"	17'-10"	17'-3"	-	19'-8"	18'-3"	17'-7"	-
11-7/8"	NI-20	19'-4"	18'-0"	17'-1"	-	19'-9"	18'-1"	17'-1"	-
	NI-40x	20'-10"	19'-4"	18'-6"	-	21'-5"	19'-11"	19'-0"	-
	NI-60	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-3"	-
	NI-80	22'-6"	20'-10"	19'-11"	-	23'-1"	21'-5"	20'-5"	-
	NI-90	23'-0"	21'-3"	20'-4"	-	23'-6"	21'-10"	20'-10"	-
14"	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	21'-5"	-
	NI-60	23'-9"	22'-0"	21'-0"	-	24'-5"	22'-8"	21'-8"	-
	NI-80	25'-4"	23'-6"	22'-5"	-	25'-11"	24'-1"	23'-0"	-
	NI-90	25'-10"	23'-11"	22'-9"	-	26'-5"	24'-6"	23'-4"	-
16"	NI-60	26'-2"	24'-3"	23'-2"	-	26'-11"	25'-0"	23'-11"	-
	NI-80	27'-11"	25'-10"	24'-7"	-	28'-7"	26'-6"	25'-3"	-
	NI-90	28'-5"	26'-3"	25'-0"	-	29'-0"	26'-11"	25'-8"	-

#### Notes:

1. The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.



# NORDIC

## STRUCTURES

### Maximum Floor Spans – S7.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued Canadian softwood plywood

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9'-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	15'-1"
	NI-60	17'-1"	16'-1"	15'-6"	14'-10"	17'-6"	16'-6"	15'-11"	15'-3"
	NI-80	18'-1"	17'-0"	16'-4"	15'-8"	18'-7"	17'-4"	16'-8"	16'-0"
11'-7/8"	NI-20	17'-10"	16'-10"	16'-2"	15'-7"	18'-5"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-3"	17'-10"	17'-2"	16'-6"	19'-10"	18'-5"	17'-8"	16'-11"
	NI-60	19'-6"	18'-1"	17'-4"	16'-8"	20'-1"	18'-8"	17'-10"	17'-1"
	NI-80	20'-11"	19'-4"	18'-5"	17'-7"	21'-5"	19'-10"	18'-11"	17'-11"
	NI-90	21'-4"	19'-9"	18'-9"	17'-10"	21'-10"	20'-3"	19'-3"	18'-3"
14"	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"
	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"
	NI-80	23'-3"	21'-6"	20'-5"	19'-4"	23'-10"	22'-1"	21'-0"	19'-11"
	NI-90	23'-9"	21'-11"	20'-10"	19'-8"	24'-3"	22'-6"	21'-5"	20'-3"
16"	NI-60	23'-7"	21'-10"	20'-10"	19'-9"	24'-4"	22'-7"	21'-7"	20'-5"
	NI-80	25'-4"	23'-5"	22'-3"	21'-1"	26'-0"	24'-1"	22'-11"	21'-8"
	NI-90	25'-10"	23'-10"	22'-8"	21'-5"	26'-5"	24'-6"	23'-4"	22'-0"

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9'-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-7"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	18'-2"	16'-10"
11'-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-9"	20'-3"	19'-4"	17'-8"	22'-4"	20'-5"	19'-4"	17'-8"
	NI-60	22'-0"	20'-6"	19'-7"	18'-4"	22'-7"	20'-10"	19'-8"	18'-4"
	NI-80	23'-6"	21'-10"	20'-10"	19'-9"	24'-0"	22'-5"	21'-4"	20'-0"
	NI-90	24'-0"	22'-4"	21'-3"	20'-1"	24'-6"	22'-10"	21'-9"	20'-7"
14"	NI-40x	24'-4"	22'-8"	21'-8"	19'-5"	25'-0"	23'-2"	21'-9"	19'-5"
	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10"
	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"
16"	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11"
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

# NORDIC

## STRUCTURES

### Maximum Floor Spans – M2.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued oriented strand board (OSB) sheathing

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	16'-0"	-
11-7/8"	NI-20	17'-0"	16'-0"	15'-6"	-	17'-6"	16'-7"	16'-0"	-
	NI-40x	18'-2"	17'-1"	16'-6"	-	18'-9"	17'-6"	16'-11"	-
	NI-60	18'-5"	17'-3"	16'-8"	-	19'-0"	17'-8"	17'-1"	-
	NI-80	19'-9"	18'-3"	17'-7"	-	20'-4"	18'-10"	18'-0"	-
	NI-90	20'-2"	18'-8"	17'-10"	-	20'-9"	19'-2"	18'-4"	-
14"	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
	NI-80	21'-11"	20'-3"	19'-4"	-	22'-7"	20'-11"	20'-0"	-
	NI-90	22'-5"	20'-8"	19'-9"	-	23'-0"	21'-4"	20'-4"	-
16"	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
	NI-60	18'-2"	17'-1"	16'-4"	-	18'-8"	17'-4"	16'-4"	-
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-
11-7/8"	NI-20	19'-7"	18'-2"	17'-3"	-	19'-11"	18'-3"	17'-3"	-
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-0"	-
	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
14"	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	20'-11"	-
	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
16"	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	-

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

# NORDIC

## STRUCTURES

### Maximum Floor Spans – M4.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued oriented strand board (OSB) sheathing

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	14'-11"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"	16'-0"	15'-4"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-11"	16'-11"	16'-3"	15'-8"	18'-7"	17'-5"	16'-10"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-6"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-80	21'-1"	19'-6"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90	21'-6"	19'-10"	18'-11"	17'-11"	22'-0"	20'-4"	19'-5"	18'-4"
14"	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90	23'-10"	22'-1"	21'-0"	19'-10"	24'-5"	22'-7"	21'-6"	20'-4"
16"	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"
	NI-80	25'-6"	23'-7"	22'-5"	21'-2"	26'-2"	24'-3"	23'-1"	21'-10"
	NI-90	26'-0"	24'-0"	22'-10"	21'-6"	26'-7"	24'-8"	23'-5"	22'-2"

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
	NI-40x	21'-10"	20'-4"	19'-0"	17'-0"	22'-5"	20'-6"	19'-0"	17'-0"
	NI-60	22'-1"	20'-7"	19'-8"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-80	23'-8"	22'-0"	20'-11"	19'-10"	24'-1"	22'-6"	21'-6"	20'-0"
	NI-90	24'-1"	22'-5"	21'-4"	20'-2"	24'-7"	22'-11"	21'-10"	20'-7"
14"	NI-40x	24'-5"	22'-9"	20'-11"	18'-8"	25'-1"	22'-11"	20'-11"	18'-8"
	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-80	26'-6"	24'-8"	23'-6"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90	27'-0"	25'-1"	23'-11"	22'-7"	27'-6"	25'-8"	24'-6"	23'-2"
16"	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-80	29'-1"	27'-1"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90	29'-7"	27'-6"	26'-2"	24'-9"	30'-2"	28'-2"	26'-10"	25'-5"

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

# NORDIC

## STRUCTURES

### Maximum Floor Spans – M6.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued Canadian softwood plywood

#### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
	NI-60	16'-1"	15'-2"	14'-8"	-	16'-6"	15'-7"	15'-1"	-
	NI-80	17'-1"	16'-1"	15'-6"	-	17'-5"	16'-5"	15'-10"	-
11-7/8"	NI-20	16'-9"	15'-10"	15'-4"	-	17'-4"	16'-4"	15'-10"	-
	NI-40x	17'-10"	16'-10"	16'-3"	-	18'-6"	17'-4"	16'-9"	-
	NI-60	18'-1"	17'-0"	16'-5"	-	18'-9"	17'-6"	16'-11"	-
	NI-80	19'-6"	18'-0"	17'-4"	-	20'-1"	18'-7"	17'-9"	-
	NI-90	19'-11"	18'-4"	17'-8"	-	20'-5"	18'-11"	18'-1"	-
14"	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
	NI-80	21'-8"	20'-0"	19'-1"	-	22'-4"	20'-8"	19'-9"	-
	NI-90	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-0"	20'-1"	-
16"	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
	NI-80	23'-7"	21'-10"	20'-10"	-	24'-4"	22'-6"	21'-6"	-
	NI-90	24'-1"	22'-2"	21'-2"	-	24'-9"	22'-11"	21'-10"	-

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-
	NI-40x	17'-9"	16'-10"	15'-11"	-	18'-2"	16'-11"	15'-11"	-
	NI-60	17'-11"	16'-11"	16'-2"	-	18'-5"	17'-2"	16'-2"	-
	NI-80	19'-3"	17'-10"	17'-3"	-	19'-8"	18'-3"	17'-7"	-
11-7/8"	NI-20	19'-4"	18'-0"	17'-1"	-	19'-9"	18'-1"	17'-1"	-
	NI-40x	20'-10"	19'-4"	18'-6"	-	21'-5"	19'-11"	19'-0"	-
	NI-60	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-3"	-
	NI-80	22'-6"	20'-10"	19'-11"	-	23'-1"	21'-5"	20'-5"	-
	NI-90	23'-0"	21'-3"	20'-4"	-	23'-6"	21'-10"	20'-10"	-
14"	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	20'-11"	-
	NI-60	23'-9"	22'-0"	21'-0"	-	24'-5"	22'-8"	21'-8"	-
	NI-80	25'-4"	23'-6"	22'-5"	-	25'-11"	24'-1"	23'-0"	-
	NI-90	25'-10"	23'-11"	22'-9"	-	26'-5"	24'-6"	23'-4"	-
16"	NI-60	26'-2"	24'-3"	23'-2"	-	26'-11"	25'-0"	23'-11"	-
	NI-80	27'-11"	25'-10"	24'-7"	-	28'-7"	26'-6"	25'-3"	-
	NI-90	28'-5"	26'-3"	25'-0"	-	29'-0"	26'-11"	25'-8"	-

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.



# NORDIC

## STRUCTURES

### Maximum Floor Spans – M7.1

#### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued Canadian softwood plywood

#### Maximum Floor Spans

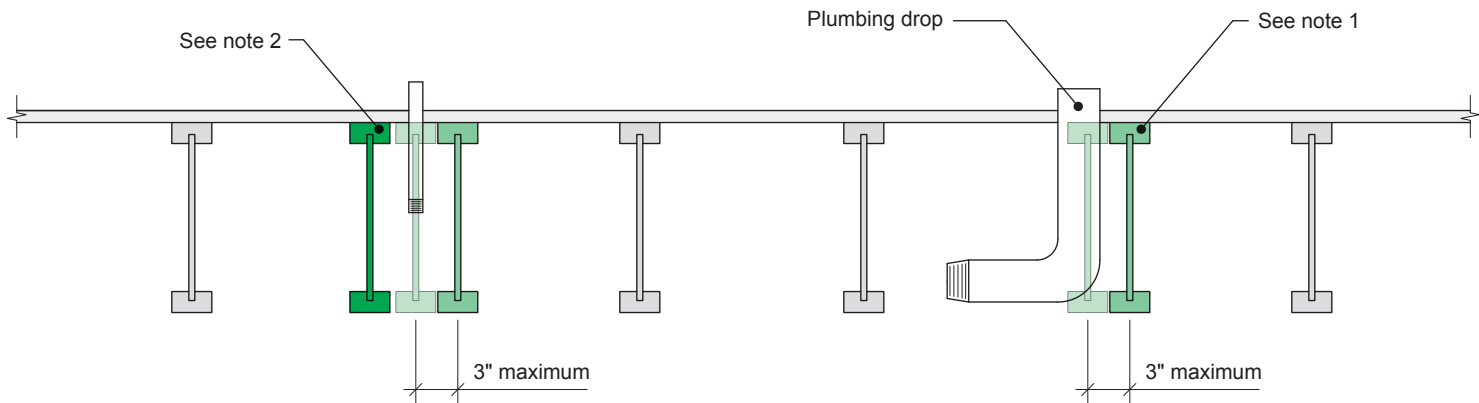
Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9'-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	14'-11"
	NI-60	17'-1"	16'-1"	15'-6"	14'-10"	17'-6"	16'-6"	15'-11"	15'-3"
	NI-80	18'-1"	17'-0"	16'-4"	15'-8"	18'-7"	17'-4"	16'-8"	16'-0"
11'-7/8"	NI-20	17'-10"	16'-10"	16'-2"	15'-7"	18'-5"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-3"	17'-10"	17'-2"	16'-6"	19'-10"	18'-5"	17'-8"	16'-11"
	NI-60	19'-6"	18'-1"	17'-4"	16'-8"	20'-1"	18'-8"	17'-10"	17'-1"
	NI-80	20'-11"	19'-4"	18'-5"	17'-7"	21'-5"	19'-10"	18'-11"	17'-11"
	NI-90	21'-4"	19'-9"	18'-9"	17'-10"	21'-10"	20'-3"	19'-3"	18'-3"
14"	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"
	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"
	NI-80	23'-3"	21'-6"	20'-5"	19'-4"	23'-10"	22'-1"	21'-0"	19'-11"
	NI-90	23'-9"	21'-11"	20'-10"	19'-8"	24'-3"	22'-6"	21'-5"	20'-3"
16"	NI-60	23'-7"	21'-10"	20'-10"	19'-9"	24'-4"	22'-7"	21'-7"	20'-5"
	NI-80	25'-4"	23'-5"	22'-3"	21'-1"	26'-0"	24'-1"	22'-11"	21'-8"
	NI-90	25'-10"	23'-10"	22'-8"	21'-5"	26'-5"	24'-6"	23'-4"	22'-0"

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9'-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-7"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"
	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	18'-2"	16'-10"
11'-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
	NI-40x	21'-9"	20'-3"	19'-0"	17'-0"	22'-4"	20'-5"	19'-0"	17'-0"
	NI-60	22'-0"	20'-6"	19'-7"	18'-4"	22'-7"	20'-10"	19'-8"	18'-4"
	NI-80	23'-6"	21'-10"	20'-10"	19'-9"	24'-0"	22'-5"	21'-4"	20'-0"
	NI-90	24'-0"	22'-4"	21'-3"	20'-1"	24'-6"	22'-10"	21'-9"	20'-7"
14"	NI-40x	24'-4"	22'-8"	20'-11"	18'-8"	25'-0"	22'-11"	20'-11"	18'-8"
	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10"
	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"
16"	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11"
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"

#### Notes:

- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

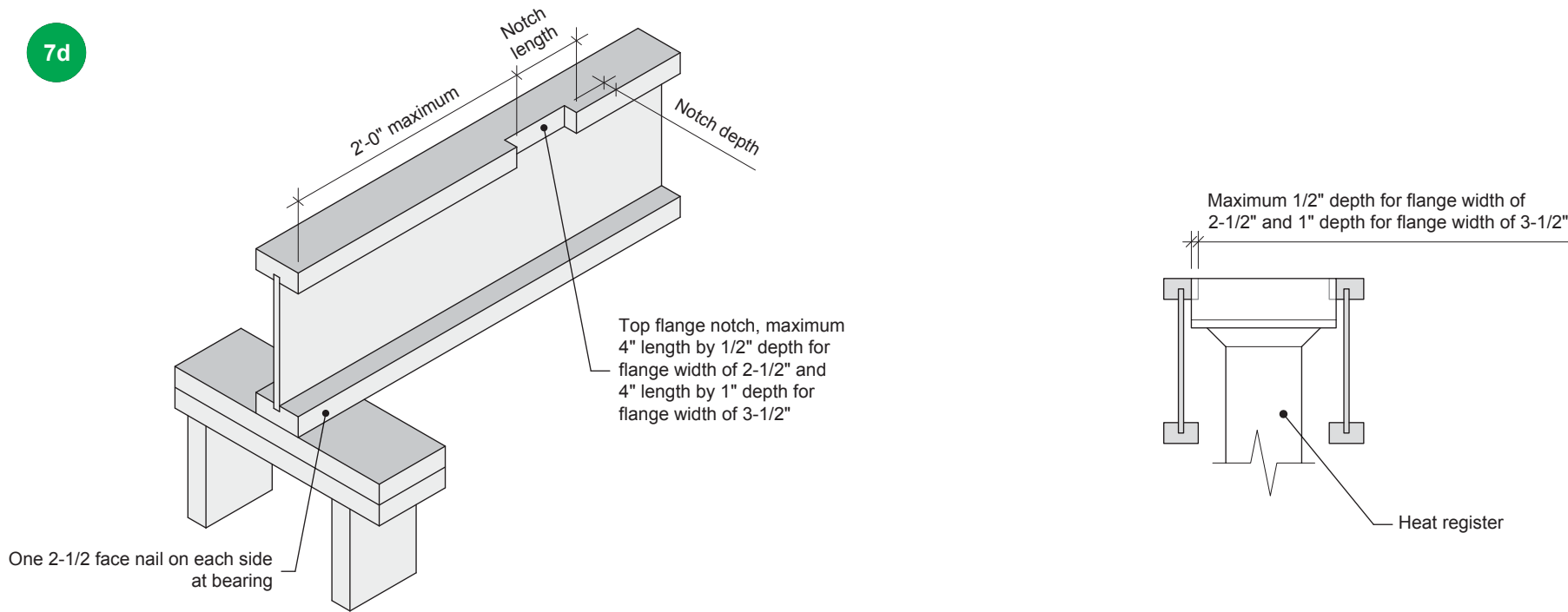
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- Notes:
- 1. To prevent interference with plumbing, a joist may be shifted up to 3 inches if the edge of the floor panel is supported and the span rating is not exceeded.
  - 2. In all other cases, an additional joist is required.

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 clarity.

7d



- Notes:**
- 1. 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 length by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch length 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.

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 clarity.