

		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	4
J2	12-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	19
J4	4-00-00	9 1/2" NI-40x	1	4
J5	2-00-00	9 1/2" NI-40x	1	4
J6	18-00-00	9 1/2" NI-80	1	27
B1	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B9	10-00-00	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
B14L	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	1	1
B16L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B6	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B10L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B11L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B12L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B15L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B3	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

C	Connector Summary				
Qty	Manuf	Product			
11	H1	IUS2.56/9.5			
6	H1	IUS2.56/9.5			
2	H1	IUS2.56/9.5			
2	H1	IUS2.56/9.5			
2	H2	HUS1.81/10			
3	H1	IUS3.56/9.5			
8	H1	IUS3.56/9.5			
3	H3	IUS3.56/9.5			
1	H4C	HUC410			

DATE: 5/25/23

1st FLOOR FRAMING



FROM PLAN DATED: JULY 2019

BUILDER: BAYVIEW WWELLINGTON

SITE: ALCONA SHORES

MODEL: RL-4

ELEVATION: A & A2

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

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

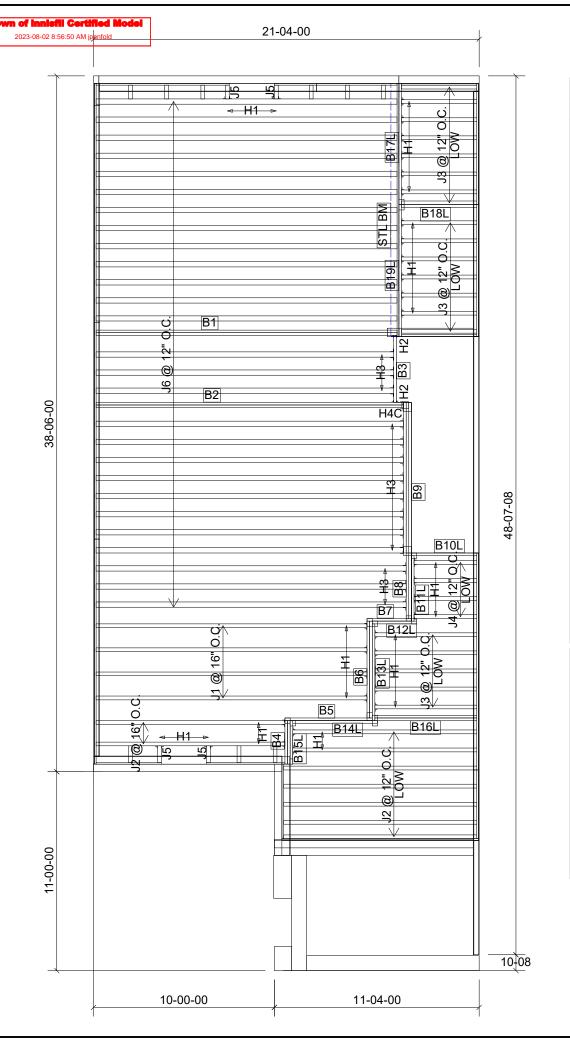
BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED

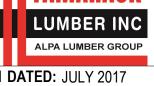


Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	4
J2	12-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	20
J4	4-00-00	9 1/2" NI-40x	1	4
J5	2-00-00	9 1/2" NI-40x	1	4
J6	18-00-00	9 1/2" NI-80	1	27
B1	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B9	10-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B17L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B19L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B13L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B14L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B18L	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	1	1
B16L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B6	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B10L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B11L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B12L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B15L	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B3	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
Cor	nector Sum	mary		

Connector Summary				
Qty	Manuf	Product		
23	H1	IUS2.56/9.5		
6	H1	IUS2.56/9.5		
2	H1	IUS2.56/9.5		
2	H1	IUS2.56/9.5		
2	H2	HUS1.81/10		
3	H3	IUS3.56/9.5		
3	H3	IUS3.56/9.5		
8	H3	IUS3.56/9.5		
1	H4C	HUC410		

DATE: 5/25/23

1st FLOOR FRAMING SUNKEN MUDROOM



FROM PLAN DATED: JULY 2017

BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: RL-4

ELEVATION: A & A2, B & B2

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

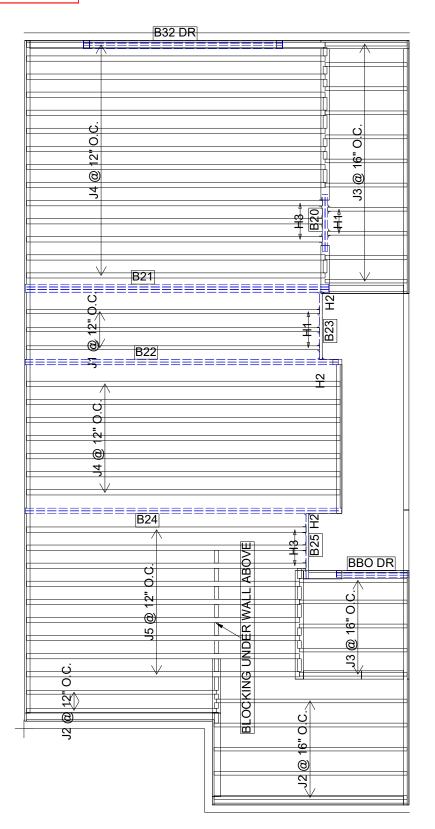
LOADING:

LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED

Town of Innisfii Certified Model 2023-08-02 8:56:50 AM jpenfold



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	3
J2	12-00-00	9 1/2" NI-40x	1	7
J3	6-00-00	9 1/2" NI-40x	1	16
J4	18-00-00	9 1/2" NI-80	1	21
J5	16-00-00	9 1/2" NI-80	1	9
B22	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B24	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B21	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B32 DR	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B23	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B25	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B20	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

	Connector Summary				
Qty	Manuf	Product			
3	H1	IUS2.56/9.5			
2	H1	IUS2.56/9.5			
2	H2	HUS1.81/10			
1	H2	HUS1.81/10			
3	H1	IUS3.56/9.5			
3	H1	IUS3.56/9.5			



FROM PLAN DATED: JULY 2019

BUILDER: BAYVIEW WWELLINGTON

SITE: ALCONA SHORES

MODEL: RL-4

ELEVATION: A & A2

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

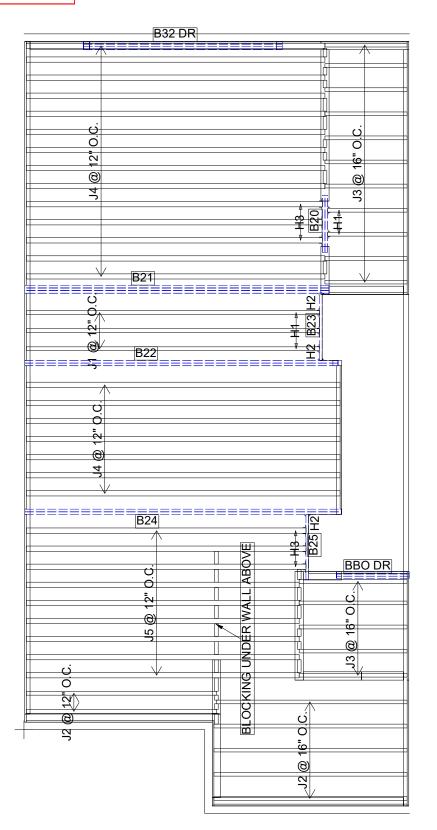
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2023-05-10

2nd FLOOR FRAMING

Town of Innisfii Certified Model 2023-08-02 8:56:50 AM jpenfold



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	3
J2	12-00-00	9 1/2" NI-40x	1	7
J3	6-00-00	9 1/2" NI-40x	1	16
J4	18-00-00	9 1/2" NI-80	1	21
J5	16-00-00	9 1/2" NI-80	1	9
B22	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B24	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B21	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B32 DR	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B23	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B25	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B20	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

	Connector Summary			
Qty	Manuf	Product		
3	H1	IUS2.56/9.5		
2	H1	IUS2.56/9.5		
2	H2	HUS1.81/10		
1	H2	HUS1.81/10		
3	H1	IUS3.56/9.5		
3	H1	IUS3.56/9.5		



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: RL-4
ELEVATION: B & B2

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

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. 1-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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

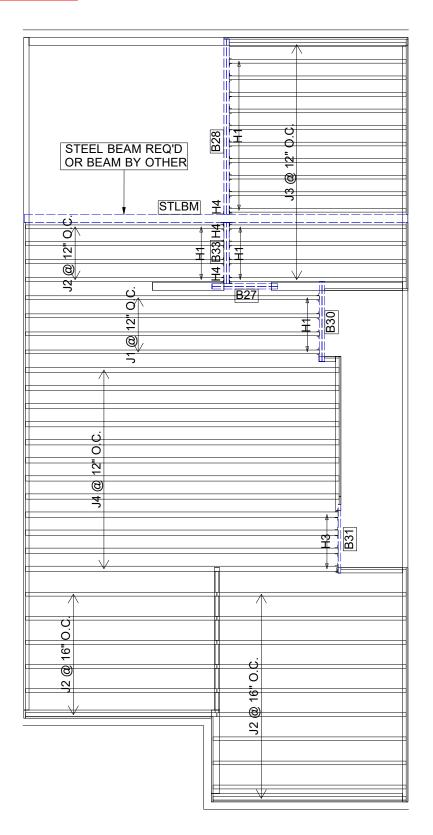
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2023-05-10

2nd FLOOR FRAMING

Town of Inniefii Certified Model 2023-08-02 8:56:50 AM jpenfold



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	4
J2	12-00-00	9 1/2" NI-40x	1	20
J3	10-00-00	9 1/2" NI-40x	1	15
J4	18-00-00	9 1/2" NI-80	1	12
B28	10-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B30	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B31	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B27	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B33	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

C	Connector Summary				
Qty	Manuf	Product			
22	H1	IUS2.56/9.5			
4	H1	IUS3.56/9.5			
1	H4	HGUS410			
2	H4	HGUS410			



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WWELLINGTON

SITE: ALCONA SHORES

MODEL: RL-4

ELEVATION: A & A2

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

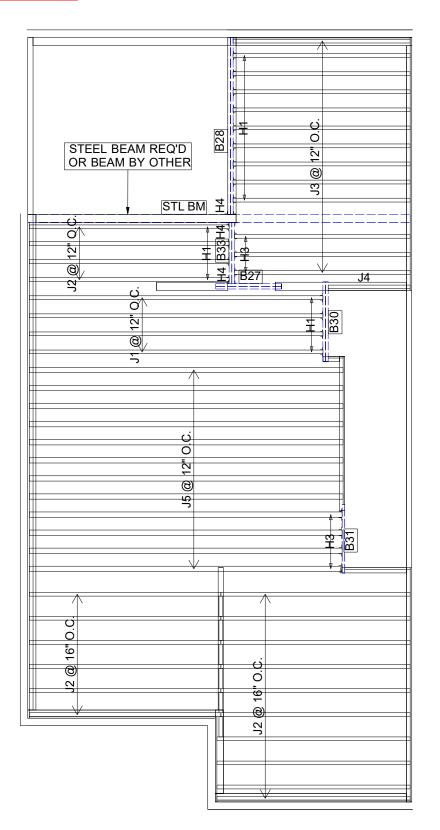
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2023-05-10

3rd FLOOR FRAMING

Town of innisfii Certified Model 2023-08-02 8:56:50 AM jpenfold



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	4
J2	12-00-00	9 1/2" NI-40x	1	20
J3	10-00-00	9 1/2" NI-40x	1	13
J4	6-00-00	9 1/2" NI-40x	1	1
J5	18-00-00	9 1/2" NI-80	1	12
B28	10-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B30	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B31	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B27	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B33	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

	Connector Summary				
Qty	Manuf	Product			
17	H1	IUS2.56/9.5			
4	H1	IUS3.56/9.5			
3	H1	IUS3.56/9.5			
1	H4	HGUS410			
2	H4	HGUS410			



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: RL-4
ELEVATION: B & B2

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

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. 1-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES
4/5 FOR REINFORCEMENT REQUIREMENTS.

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

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.

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/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2023-05-10

3rd FLOOR FRAMING

INSTALLATION GUIDE NORDIC JOIST NS-GI33 **■**◆■

VERSION 2020-10-01

Engineered Wood Products

BASIC INSTALLATION **GUIDE FOR RESIDENTIAL FLOORS**

NORDIC **"**JOIST

NORDIC **STRUCTURES**

WEB STIFFENERS

NAIL SPACING

nordic.ca

1 x 2-5/16 Minimum width 1-1/2 x 2-5/16 Minimum width

1a

1g

1h

2-1/2" nails at 6" o.c.

INSTALLING NORDIC I-JOISTS

- . Except for cutting to length, I-joist flanges should never be cut, drilled or notched
- Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment
- 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.
- I-joists must be protected from the weather prior to installation.
- 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
- 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.
- 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.
- For I-ioists installed directly beneath bearing walls parallel to the joists or used as rim board or blocking panels, the m using a single I-joist is 3,300 plf, and 6,600 plf if double I-joists are used.
- . 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.
- . 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).

1b

1

- B. Details 1 show only I-joist-specific fastener requirements. For other fastener requirements, see the applicable building code
- 4. 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.

NI-20 2×3 S-P-F No. 2

NORDIC I-JOIST SERIES RESIDENTIAL SERIES

2x3 1950f MSR 3/8 in. web 33 pieces per unit

1d

1k



and sheathed

2×4 2100f MSR 23 pieces per

2x plate flush with inside face of wall or beam. 1/8" overhang allowed past inside face of wall or beam.

SAFETY AND CONSTRUCTION PRECAUTIONS

Avoid Accidents by Following these Important Guidelines

of I-ioists at the end of the bay.

rim board, or cross-bridging.

5. Never install a damaged I-joist

-joists are not stable until completely installed, and will not carry any load until fully brace

I. 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

2. When the building is completed, the floor sheathing will provide lateral support for the top

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

end of each bay. Lap ends of adjoining bracing over at least two I-joists.

system. Then, stack building materials over beams or walls only.

flanges of the I-joists. Until this sheathing is applied, temporary bracing, often called struts,

3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels

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

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

Width 1-1/8 in. APA Rim Board Plus

RIM BOARDS

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 Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet

Never stack building materials over unsheathed I-joists Once sheathed, do no overstress I-joist with

Do not walk on I-joist

braced or serious

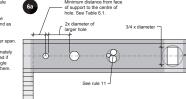
until fully fastened an

WEB HOLES AND OPENINGS

WEB HOLES IN I-JOISTS

- Rules for Cutting Holes in I-Joists The distance between the inside edge of the support and the centreline of any hole shall be in compliance with the requirement of Table 6.1.
- Whenever possible, field-cut holes should be centred on the middle of the web.

- A 1-1/2 inch hole or smaller can be placed anywhere in the web provide that it meets the requirements of rule number 6 above.
- All holes shall be cut in acc with the restrictions listed a illustrated in detail 6a.



DUCT CHASE OPENINGS

6b

11-7/8

The distance between the inside edge of the support and the co duct chase opening shall be in compliance with the requiremen

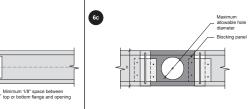
Rules for Cutting Duct Chase Openings in I-joists

- . I-joist top and bottom flanges must never be cut, notched or otherwise mo
- 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. The top and bottom flanges of an I-joist blocking panel must never be cut, notched or otherwise modified
- All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.

HOLES IN BLOCKING PANELS

Holes cut into the blocking panels are subject to the following limitations:

Allowable Hole Size in Lateral-restraint-only Blocking Panels



blocking depth (in.)	hole diameter (in.) (a)
9-1/2	6-1/4
11-7/8	7-3/4
14	9-1/4
16	10-1/2
Manianos allacosta trata discusta in	

TABLE 6.1 - LOCATION OF WEB HOLES



	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"	-	-	-	-	-	-	-	-	-
	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"	-	-	-	-	-	-
11-7/8"	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"	-	-	-	-	-	-
	NI-90	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'-0"	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"	-	-	-
14"	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"	-	-	-
	NI-90	0'-7"	0'-8"	0'-10"	2'-5"	4'-0"	4'-5"	5'-9"	7'-5"	8'-8"	9'-4"	11'-4"	12'-11"	-	-	-
	NI-60	0'-7"	0'-8"	0'-8"	1'-6"	2'-10"	3'-2"	4'-2"	5'-6"	6'-4"	7'-0"	8'-5"	9'-8"	10'-2"	12'-2"	13'-9"
16"	NI-80	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"
	All OO	01.70	01.011	01.011	41.05	01.05	01.05	41.07	01.51	71.51	01.011	01.401	441.00	441.00	401.01	451.49

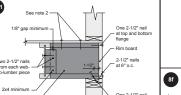
TABLE 6.2 - LOCATION OF DUCT CHASE OPENINGS Simple span

8-5/8

9-1/2	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
	NI-20	5'-9"	6'-2"	6'-6"	-	-	-	-	-	-
	NI-40x	6'-8"	7'-2"	7'-6"	8'-1"	8'-6"	9'-1"	9"-6"	-	-
11-7/8"	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"
	NI-90	7'-6"	7'-11"	8'-4"	8'-9"	9'-2"	9'-7"	10'-1"	10'-7"	10'-
	NI-40x	8'-1"	8'-7"	9'-0"	9'-6"	10'-1"	10'-7"	11'-2"	-	-
14"	NI-60	8'-9"	9'-3"	9'-8"	10'-11"	10'-6"	11'-1"	11'-6"	-	-
144	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7"	11'-1"	11'-6"	12'-1"	12"
	NI-90	9'-2"	9'-8"	10'-0"	10'-6"	10'-11"	11'-5"	11'-9"	12'-4"	12'
	NI-60	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	-	-
16"	NI-80	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12'-7"	13'-1"	13'-8"	14'
	NI-90	10'-9"	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14'-2"	14'





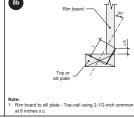


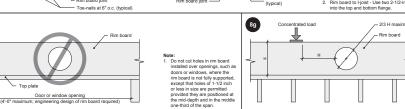
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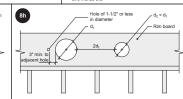
construction details \rightarrow DC3

RIM BOARDS

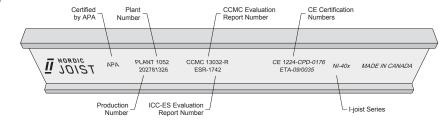


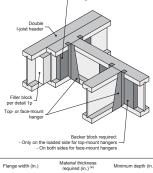




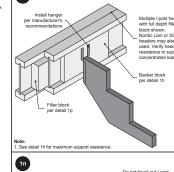


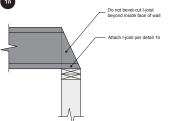
-JOIST MARKING

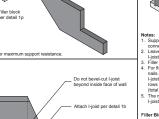


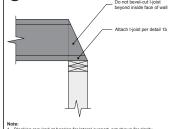


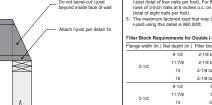
use net joist depth minus 3-1/4 inches for joists with

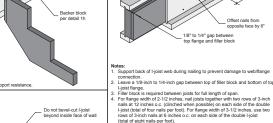






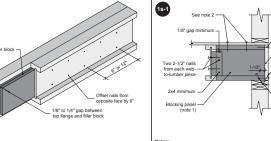






1p

2-1/8 to 2-1/4 x 6 2x6 + 5/8" or 3/4" she 2-1/8 to 2-1/4 x 8 2x8 + 5/8" or 3/4" she 2-1/8 to 2-1/4 x 10 2x10 + 5/8" or 3/4" she 2-1/8 to 2-1/4 x 12 2x12 + 5/8" or 3/4" sheathing 2 x 2x10 2 x 2x12



MODEL:

BAYVIEW WWELLINGTON SM-ipenfold

CITY:

ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

1ST FLR FRAMING Level: Label: B1 - i8549

Type: **Beam**

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

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:32 8.5.3.233.Update5.15 16-01-10 16-09-00

SUPPORT AND REACTION INFORMATION

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 edge of the member must be fully restrained or have th following maximum unbraced length:

Bottom: 16'- 1 5/8" Top: 0'

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 7/8"
- 615 psi Beam @ 16'- 4 1/2"

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.



_							
l	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	7'- 6 13/16"	1.25D + 1.5L	1.00	2719 lb ft	23299 lb ft	Passed - 12%
l	Factored Neg. Moment:	16'- 4 1/2"	1.25D + 1.5L	1.00	1036 lb ft	17670 lb ft	Passed - 6%
l	Factored Shear:	15'- 6"	1.25D + 1.5L	1.00	768 lb	11052 lb	Passed - 7%
١	Live Load (LL) Pos. Defl.:	7'- 11 7/8"	L		0.108"	L/360	Passed - L/999
l	Total Load (TL) Pos. Defl.:	7'- 11 1/2"	D + L		0.183"	L/240	Passed - L/999

ID	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-14	1.25D +	1.5L	1.00	741 lb		6825 lb	4037 lb	Passed - 18%
2	5-08	1.25D +	1.5L	1.00	7796 lb		20020 lb	11839 lb	Passed - 66%
SPEC	CIFIED LOAD	os							
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weigh	t 0'	16'- 9"	Self Wei	ght	Тор	9 lb/ft	-	-	-
Uniforn	n 0'	16'- 6 3/8"	FC4 Floor D (Plan View		Тор	20 lb/ft	40 lb/ft	-	-
Point	16'- 6 1/2"	16'- 6 1/2"	B3(i855	0)	Front	285 lb	543 lb	-	-
Point	16'- 6 1/4"	16'- 6 1/4"	6(i245)	Тор	2132 lb	2060 lb	-	-
UNFA	ACTORED R	EACTIONS							
ID	Start Loc	End Loc	So	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 1 7/8"	E	1(i1)		246 lb	336 lb	-	-
2	16'- 3 1/2"	16'- 9"	STL	BM(i12))	2662 lb	2932 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.
- 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=1.581", W=3.500". LDF=1.00, Pf=5755 lb, Q'r=5755 lb, Result=100.00%.

PLY TO PLY CONNECTION

MODEL:

SM-ipenfold

CITY:

ALCONA SHORES

RL-4 INNISFIL

BAYVIEW WWELLINGTON

1ST FLR FRAMING Level: Label: B2 - i8548 Type: **Beam**

Job Name: RL-4

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

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:32 8.5.3.233.Update5.15 16-10-04 17-00-02

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:

Bottom: 16'- 3 3/4" Top: 0'

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 7/8"
- 615 psi Beam @ 17'- 1/8"

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.



A	NALYSIS RESULTS						
	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Fa	actored Pos. Moment:	8'- 11 5/16"	1.25D + 1.5L	1.00	3529 lb ft	23299 lb ft	Passed - 15%
Fa	actored Shear:	0'- 11 3/8"	1.25D + 1.5L	1.00	717 lb	11052 lb	Passed - 6%
Liv	ve Load (LL) Pos. Defl.:	8'- 8 1/8"	L		0.158"	L/360	Passed - L/999
To	tal Load (TL) Pos. Defl.:	8'- 7 15/16"	D + L		0.273"	L/240	Passed - L/740

S	UP	PORT AND	REACTION INFORM	IATION					
II	D	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
•	1	1-14	1.25D + 1.5L	1.00	810 lb		6825 lb	4037 lb	Passed - 20%
	2	1-08	1.25D + 1.5L	1.00	2004 lb		5460 lb	-	Passed - 37%

CONNECTOR INFORMATION

ID	Dort No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for
טו	Part No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories
2	LILICAAO					Connector meanwally an edified by the

* 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.

SPECIF	SPECIFIED LOADS											
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)				
Self Weight	0'	17'- 1/8"	Self Weight	Тор	9 lb/ft	-	-	-				
Uniform	0'	16'- 7 3/8"	FC4 Floor Decking (Plan View Fill)	Тор	18 lb/ft	37 lb/ft	-	-				
Point	16'- 6 1/2"	16'- 6 1/2"	B3(i8550)	Back	314 lb	612 lb	-	-				
UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 1 7/8"	E1(i1)		248 lb	335 lb	-	-				
2	17'- 1/8"	17'- 1/8"	B9(i8609)		533 lb	890 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

SM-ipenfold

MODEL:

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: **1ST FLR FRAMING** B3 - i8550

Label: Type: **Beam**

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

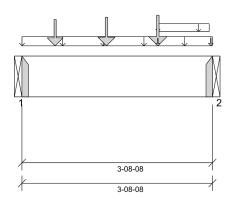
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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



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:

Bottom: 0'- 10 1/4" Top: 0'

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 3'- 8 1/2"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 7 3/4"	1.25D + 1.5L	1.00	1402 lb ft	11650 lb ft	Passed - 12%
Factored Shear:	2'- 11"	1.25D + 1.5L	1.00	1079 lb	5526 lb	Passed - 20%
Total Load (TL) Pos. Defl.:	1'- 10 3/16"	D + L		0.010"	L/240	Passed - L/999

SUF	PPORT AND	REACTION INFORM	MATION					
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	1312 lb		2730 lb	-	Passed - 48%
2	1-08	1.25D + 1.5L	1.00	1171 lb		2730 lb	-	Passed - 43%

CO	NNECTOR II	NFORMATION					
ID	Part No.	Manufacturer	Na	ailing Requirem	ents	Other Information or Requirement for	
טו	Fait No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories	
1	HUS1.81/10		-	-	-	Connector manually specified by the user.	
2	HUS1.81/10		-	-	-	Connector manually specified by the user.	

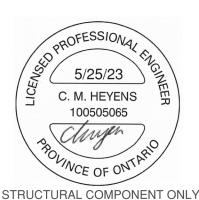
* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIF	IED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 8 1/2"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	0'	3'- 8 1/2"	User Load	Top	20 lb/ft	40 lb/ft	-	-
Uniform	2'- 7 3/4"	3'- 7 3/4"	FC4 Floor Decking (Plan View Fill)	Тор	2 lb/ft	3 lb/ft	-	-
Point	0'- 7 3/4"	0'- 7 3/4"	J6(i8501)	Back	149 lb	299 lb	-	-
Point	1'- 7 3/4"	1'- 7 3/4"	J6(i8516)	Back	167 lb	334 lb	-	-
Point	2'- 7 3/4"	2'- 7 3/4"	J6(i8511)	Back	183 lb	367 lb	-	-
Point	2'- 7 3/4"	2'- 7 3/4"	FC4 Floor Decking (Plan View Fill)	Тор	0 lb	0 lb	-	-
Point	3'- 8 1/8"	3'- 8 1/8"	6(i245)	Top	7 lb	4 lb	-	-
UNFAC	TORED R	EACTIONS	5					
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	O'	O'	P2/(9549)		314 lb	612 lb	_	

	UNFAC	CTORED RI	EACTIONS					
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
	1	0'	0'	B2(i8548)	314 lb	612 lb	-	-
П	2	3'- 8 1/2"	3'- 8 1/2"	B1(i8549)	285 lb	543 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
- 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.



DWG # TF23051649

Town of inniefii C

Stiffende BAYVIEW WWELLINGTON
Stiffende ALCONA SHORES

MODEL: RL-4
CITY: INNISFIL

Job Name: RL-4

Level: 1ST FLR FRAMING

Label: **B4 - i8508**Type: **Beam**

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

Report Version: 2021.03.26

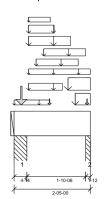
Status:

Design
Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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



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'- 11 3/4"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3 7/8"
- 615 psi Column @ 2'- 4 1/4"

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 # TF23051650 PG 1/2

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 4 3/16"	1.25D + 1.5L	1.00	925 lb ft	23299 lb ft	Passed - 4%
Factored Neg. Moment:	0'- 3 7/8"	1.25D + 1.5L	1.00	514 lb ft	23299 lb ft	Passed - 2%
Factored Shear:	1'- 2 3/8"	1.25D + 1.5L	1.00	853 lb	11052 lb	Passed - 8%

Ш	SUP	PORT AND	REACTION INFORM	IATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
	1	4-14	1.25D + 1.5L	1.00	7668 lb		17743 lb	10493 lb	Passed - 73%
	2	1-12	1.25D + 1.5L	1.00	2756 lb		6370 lb	3767 lb	Passed - 73%

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	2'- 5"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'	1'- 1 1/2"	FC4 Floor Decking (Plan View Fill)	Тор	8 lb/ft	17 lb/ft	-	-
Uniform	0'- 5 1/2"	2'- 5"	12(i262)	Тор	81 lb/ft	-	-	-
Uniform	0'- 5 1/2"	1'- 9 1/2"	12(i262)	Тор	155 lb/ft	289 lb/ft	-	-
Uniform	0'- 5 1/2"	1'- 6 3/8"	12(i262)	Тор	86 lb/ft	121 lb/ft	-	-
Uniform	0'- 5 1/2"	1'- 3 1/4"	12(i262)	Тор	102 lb/ft	206 lb/ft	-	-
Uniform	0'- 5 1/2"	1'- 1 3/4"	12(i262)	Тор	13 lb/ft	-	-	-
Uniform	0'- 8 3/8"	2'- 3/8"	12(i262)	Тор	77 lb/ft	117 lb/ft	-	-
Uniform	0'- 11 1/4"	2'- 3 1/4"	12(i262)	Тор	79 lb/ft	158 lb/ft	-	-
Uniform	1'- 11 1/4"	2'- 5"	12(i262)	Тор	230 lb/ft	430 lb/ft	-	-
Tapered	1'- 8 1/2"	2'- 5"	12(i262)	Тор	291 To 295 lb/ft	443 To 450 lb/ft	-	-
Point	1'- 1 1/2"	1'- 1 1/2"	J2(i8518)	Back	134 lb	270 lb	-	-
Point	2'- 3 3/4"	2'- 3 3/4"	J2(i8503)	Back	139 lb	279 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E14(i240)	Тор	2075 lb	1905 lb	-	-
UNFAC	TORED RE	EACTIONS	;		·			
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 7/8"	PBO14(i81)		2966 lb	3053 lb	-	-

499 lh

1008 lb

DESIGN NOTES

2'- 3 1/4"

SPECIFIED LOADS

• The dead loads used in the design of this member were applied to the structure as sloped dead loads.

PBO5(i33)

- 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.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support.
 At support 1. Required Load Area: L=1.500", W=3.500". LDF=1.00, Pf=5451 lb, Q'r=5460 lb, Result=99.84%.

PLY TO PLY CONNECTION

BAYVIEW WWELLINGTON SY inenfold ALCONA SHORES MODEL: RL-4

INNISFIL

CITY:

Level: **1ST FLR FRAMING** Label: B4 - i8508 Beam

Job Name: RL-4

Type:

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

Status: Design **Passed**

PLY TO PLY CONNECTION



Town of Inniefii C

AMirenfold
MODEL:

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4

Job Name: RL-4

Level: 1ST FLR FRAMING Label: B5 - i8250

Label: **B5 - i82**Type: **Beam**

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

WestFraser LVL

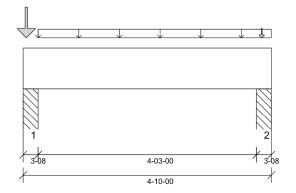
Status:

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 08:32



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'- 3"

Factored Resistance of Support Material:

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

ANALYSIS RESULTS											
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result					
Factored Pos. Moment:	3'- 1/4"	1.25D + 1.5L	1.00	73 lb ft	11650 lb ft	Passed - 1%					
Factored Neg. Moment:	0'- 2 1/2"	1.25D + 1.5L	1.00	160 lb ft	8525 lb ft	Passed - 2%					
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	114 lb	5526 lb	Passed - 2%					
SUPPORT AND REAC	SUPPORT AND REACTION INFORMATION										

1	SUPP	ORT AND R	REACTION	INFORMA	NOITA					
	ID	Input Bearing Length	Combination		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
s	1 2	3-08 1.25D + 1.5L 1.0		1.00 1.00	1261 lb 206 lb		6370 lb 6370 lb	3767 lb 3767 lb	Passed - 33% Passed - 5%	
1	SPECIFIED LOADS Type Start Loc End Loc Source									
1			Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
1	Self Weight	0'	4'- 10"	Self We	ight	Тор	5 lb/ft	-	-	-
١	Uniform	0'- 3 1/2"	4'- 10"	FC4 Floor D (Plan View		Тор	12 lb/ft	25 lb/ft	-	-
-1	Point	0'- 3/4"	0'- 3/4"	12(i26	2)	Тор	336 lb	452 lb	-	-
-1	Point	4'- 7 3/4"	4'- 7 3/4"	10(i25	8)	Тор	27 lb	43 lb	-	-
1	UNFA	CTORED R	EACTIONS	3						
1	ID	ID Start Loc End Loc Source			Dead (D)	Live (L)	Snow (S)	Wind (W)		
-1	1	0'	0'- 3 1/2"	PB	O5(i33)		390 lb	527 lb	-	-
-1	2	4'- 6 1/2"	4'- 10"	PB	O4(i32)		52 lb	81 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.



Town of Inniefii C

Stilled Mode BAYVIEW WWELLINGTON STIPES

RL-4 INNISFIL Job Name: **RL-4**

Level: 1ST FLR FRAMING

Label: **B6 - i8490** Type: **Beam**

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

Report Version: 2021.03.26

Status:

Design
Passed

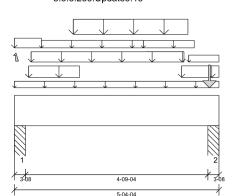
05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

MODEL:

CITY:

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



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 Column @ 0'- 2 1/2"
- 615 psi Column @ 5'- 1 3/4"

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.



STRUCTURAL COMPONENT ONLY DWG # TF23051652 PG 1/2

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 6 5/16"	1.25D + 1.5L	1.00	7045 lb ft	23299 lb ft	Passed - 30%
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	4094 lb	11052 lb	Passed - 37%
Live Load (LL) Pos. Defl.:	2'- 8 1/8"	L		0.028"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 8 1/8"	D + L		0.045"	L/240	Passed - L/999

SUP	PORT AND	REACTION INFORM	IATION					
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	3-08 3-08	1.25D + 1.5L 1.25D + 1.5L	1.00 1.00	5292 lb 6201 lb		12658 lb 12740 lb	7485 lb 7534 lb	Passed - 71% Passed - 82%

SPECIF	IED LOAD	15						
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 4 1/4"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	-0'	5'- 4 1/4"	10(i258)	Тор	81 lb/ft	-	-	-
Uniform	-0'	0'- 8 1/2"	10(i258)	Тор	102 lb/ft	297 lb/ft	-	-
Uniform	0'- 4 1/2"	1'- 8 1/2"	10(i258)	Тор	207 lb/ft	370 lb/ft	-	-
Uniform	0'- 8 1/2"	3'- 4 1/2"	10(i258)	Top	60 lb/ft	120 lb/ft	-	-
Uniform	3'- 4 1/2"	4'- 8 1/2"	10(i258)	Тор	57 lb/ft	113 lb/ft	-	-
Uniform	4'- 4 1/2"	5'- 4 1/4"	10(i258)	Тор	218 lb/ft	372 lb/ft	-	-
Uniform	4'- 6 3/4"	5'- 4 1/4"	10(i258)	Top	41 lb/ft	84 lb/ft	-	-
Tapered	0'- 5 1/4"	4'- 5 1/4"	Smoothed Load	Back	154 To 156 lb/ft	306 To 311 lb/ft	-	-
Tapered	1'- 6 1/2"	4'- 6 1/2"	10(i258)	Тор	345 lb/ft	597 To 602 lb/ft	-	-
Point	5'- 1 1/4"	5'- 1 1/4"	J1(i8525)	Back	194 lb	388 lb	-	-
Point	0'- 1/2"	0'- 1/2"	10(i258)	Тор	-	-85 lb	-	-
UNFAC	TORED RE	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)

UNFAC	LOKED KI	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO4(i32)	1452 lb	2314/-89 lb	-	-
2	5'- 3/4"	5'- 4 1/4"	PBO3(i31)	1710 lb	2716 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 Invited Contiled Modes AVVIEW WWELLINGTON

ALCONA SHORES

MODEL: RL-4

INNISFIL

CITY:

Level: 1ST FLR FRAMING
Label: B6 - i8490
Type: Beam

Job Name: RL-4

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

Design
Passed

PLY TO PLY CONNECTION



Town of inniefii C

52 Migenfold MODEL:

CITY:

BAYVIEW WWELLINGTON
ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: 1ST FLR FRAMING

Label: **B7 - i8612** Type: **Beam**

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

Report Version: 2021.03.26

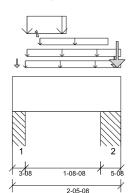
Status:

Design
Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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



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'- 10 1/2"

Factored Resistance of Support Material:

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

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	0'- 8 1/8"	1.25D + 1.5L	1.00	169 lb ft	11650 lb ft	Passed - 1%
Factored Neg. Moment:	2'- 1"	1.25D + 1.5L	1.00	1191 lb ft	11650 lb ft	Passed - 10%
Factored Shear:	1'- 2 1/2"	1.25D + 1.5L	1.00	1119 lb	5526 lb	Passed - 20%
SUPPORT AND REAC	CTION INFORM	MATION				
Input		Eastered	Eastered	Eastard	Eastard	

ID	Bearing Length	Controlling		Downward Reaction	- 1	Resistance of Member	Resistance of Support	Result
1	3-08	1.25D +	1.5L 1.00	1107 lb		6370 lb	3767 lb	Passed - 29%
2	5-08	1.25D +	1.5L 1.00	5577 lb		10010 lb	5919 lb	Passed - 94%
SPEC	IFIED LOAD)S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	2'- 5 1/2"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	0'- 3 1/2"	2'- 5 1/2"	FC4 Floor Decking (Plan View Fill)	Тор	9 lb/ft	18 lb/ft	-	-
Uniform	0'- 4"	2'- 5 1/2"	11(i257)	Тор	81 lb/ft	-	-	-
Uniform	0'- 4"	1'- 2 5/8"	11(i257)	Тор	468 lb/ft	894 lb/ft	-	-
Uniform	0'- 7 1/2"	2'- 2"	11(i257)	Тор	8 lb/ft	11 lb/ft	-	-
Point	0'- 1 1/4"	0'- 1 1/4"	10(i258)	Тор	101 lb	178 lb	-	-
Point	0'- 6 5/8"	0'- 6 5/8"	11(i257)	Тор	-	-5 lb	-	-
Point	2'- 3 3/4"	2'- 3 3/4"	User Load	Тор	200 lb	400 lb	-	-
Point	2'- 4 1/2"	2'- 4 1/2"	11(i257)	Тор	907 lb	1498 lb	-	-
UNFA	CTORED RI	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO3(i31)		487 lb	780/-4 lb	-	-
2	2'	2'- 5 1/2"	PBO6(i34)		1351 lb	2145/-1 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.
- 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=1.858", W=1.750". LDF=1.00, Pf=3381 lb, Q'r=3381 lb, Result=100.00%.



BAYVIEW WWELLINGTON SM-ipenfold MODEL:

ALCONA SHORES RL-4

INNISFIL

Job Name: RL-4

1ST FLR FRAMING Level:

Label: B8 - i8607 Type: **Beam**

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

Report Version: 2021.03.26

Status: Design Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

CITY:

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

> 2112 3-01-00

> > 3-07-08

Combination

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:

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

Factored Resistance of Support Material:

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



ANALY	SIS RESULTS	S					
De	esign Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored	Pos. Moment:	1'- 9 1/4"	1.25D + 1.5L	1.00	736 lb ft	23299 lb ft	Passed - 3%
Factored	Neg. Moment:	3'- 4 3/4"	1.25D + 1.5L	1.00	744 lb ft	23299 lb ft	Passed - 3%
Factored		2'- 6 1/4"	1.25D + 1.5L	1.00	1372 lb	11052 lb	Passed - 12%
SUPPO	ORT AND REA	ACTION INFORM	ATION				
I ID E	Input Bearing C	Controlling Load	Factored LDF Downward	Factored Uplift	Factored Resistance	Factored Resistance	Result

	Length	Combinat	tion	Reaction		of Member	of Support	rtoodit
1	2-12	1.25D + 1	.5L 1.00	951 lb	1	10010 lb	5919 lb	Passed - 16%
2	3-12	1.25D + 1	.5L 1.00	7207 II	o	13650 lb	8072 lb	Passed - 89%
SPECI	IFIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 7 1/2"	Self Weight	Тор	9 lb/ft	-	-	-
Point	0'- 9 1/4"	0'- 9 1/4"	J6(i8496)	Back	186 lb	373 lb	-	-
Point	1'- 9 1/4"	1'- 9 1/4"	J6(i8512)	Back	177 lb	353 lb	-	-
Point	2'- 9 1/4"	2'- 9 1/4"	J6(i8512)	Back	177 lb	353 lb	-	-
Point	3'- 6"	3'- 6"	User Load	Тор	350 lb	700 lb	-	-
Point	3'- 6 3/8"	3'- 6 3/8"	7(i253)	Тор	1202 lb	1888/-1 lb	-	-
UNFA	CTORED R	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 3/4"	PBO6(i34)		289 lb	546 lb	-	-
2	3'- 3 3/4"	3'- 7 1/2"	PBO2(i29)		1837 lb	3121/-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.
- 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.
- 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=1.500", W=3.500". LDF=1.00, Pf=4334 lb, Q'r=5460 lb, Result=79.37%

PLY TO PLY CONNECTION

Town of Install Certified

2 8:56:52 All the Install

Street ALCONA SHORES

RL-4 INNISFIL Job Name: **RL-4**

Level: 1ST FLR FRAMING

Label: **B9 - i8609** Type: **Beam**

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

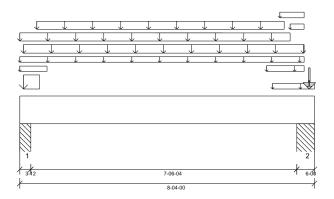
Design
Passed

Illustration Not to Scale. Pitch: 0/12

CITY:

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

Report Version: 2021.03.26 05/25/2023 08:32



DESIGN INFORMATION

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

Amendment)
Design Methodology: LSD
Service Condition: Dry

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"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 3/4"
- 615 psi Column @ 7'- 11"

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.

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5/25/23
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ROUNCE OF ONT ARIO
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STRUCTURAL COMPONENT ONLY DWG # TF23051655 PG 1/2

ı	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	4'- 13/16"	1.25D + 1.5L	1.00	17268 lb ft	34949 lb ft	Passed - 49%
l	Factored Neg. Moment:	7'- 11"	1.25D + 1.5L	1.00	2552 lb ft	34949 lb ft	Passed - 7%
l	Factored Shear:	7'- 1/2"	1.25D + 1.5L	1.00	8214 lb	16578 lb	Passed - 50%
l	Live Load (LL) Pos. Defl.:	4'- 5/16"	L		0.105"	L/360	Passed - L/859
۱	Total Load (TL) Pos. Defl.:	4'- 5/16"	D + L		0.177"	L/240	Passed - L/508

SUP	PORT AND	REACTION INFORM	IATION					
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3-12	1.25D + 1.5L	1.00	10806 lb		20475 lb	12108 lb	Passed - 89%
2	6-00	1.25D + 1.5L	1.00	19141 lb		32760 lb	19373 lb	Passed - 99%

SPECIF	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	8'- 4"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	-0'	8'- 1/2"	7(i253)	Тор	65 lb/ft	-	-	-
Uniform	-0'	0'- 9 1/4"	7(i253)	Тор	4 lb/ft	7 lb/ft	-	-
Uniform	0'- 1 1/4"	0'- 6 3/4"	7(i253)	Тор	574 lb/ft	1121 lb/ft	-	-
Uniform	6'- 11 3/4"	8'- 1/2"	7(i253)	Top	22 lb/ft	43 lb/ft	-	-
Uniform	7'- 1 3/4"	8'- 4"	FC4 Floor Decking (Plan View Fill)	Тор	17 lb/ft	33 lb/ft	-	-
Uniform	7'- 4 1/4"	8'- 1/2"	7(i253)	Тор	19 lb/ft	39 lb/ft	-	-
Uniform	7'- 7 3/4"	8'- 1/2"	7(i253)	Тор	4 lb/ft	6 lb/ft	-	-
Tapered	0'	7'- 7 3/4"	Smoothed Load	Back	188 To 183 lb/ft	377 To 366 lb/ft	-	-
Tapered	0'- 1 1/4"	8'- 1/2"	7(i253)	Top	300 To 298 lb/ft	353 To 348 lb/ft	-	-
Tapered	0'- 5 3/4"	7'- 5 3/4"	7(i253)	Top	176 To 177 lb/ft	353 To 355 lb/ft	-	-
Point	8'- 2 1/4"	8'- 2 1/4"	B2(i8548)	Back	533 lb	890 lb	-	-
Point	8'- 2 1/4"	8'- 2 1/4"	PBO17(i251)	Тор	1984 lb	2403 lb	-	-
Point	8'- 2 1/4"	8'- 2 1/4"	User Load	Тор	300 lb	600 lb	-	-

Point	8'- 2 1/4"	8'- 2 1/4"	User Load	Тор	300 lb	600 lb	-	-
UNFAC	TORED R	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 3/4"	PBO2(i29)		3207 lb	4776 lb	-	-
2	7'- 10"	8'- 4"	PBO1(i15)		5603 lb	7847 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.
- 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=3.500". LDF=1.00, Pf=6085 lb, Q'r=11527 lb, Result=52.79%.

PLY TO PLY CONNECTION

Town of Install Certified Modes AVVIEW WWELLINGTON

2 8:56:52 String food

AL CONA SHORES

MODEL: RL-4

INNISFIL

CITY:

Level: 1ST FLR FRAMING
Label: B9 - i8609
Type: Beam

Job Name: RL-4

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

Design
Passed

PLY TO PLY CONNECTION



SM-ipenfold MODEL:

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 **INNISFIL** Job Name: RL-4

Level: **1ST FLR FRAMING** Label: B10L - i8608

Type: **Beam**

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

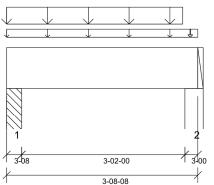
WestFraser LVL

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 08:32



DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

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

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Wall @ 3'- 6 1/2"

	Design Criteria	Loc	cation	Load	Combinatio	n LDF	Design	Limit	Result
Factore	d Pos. Moment:	1'- 1	0 9/16"	1.2	5D + 1.5L	1.00	739 lb ft	11650 lb ft	Passed - 6%
Factore	d Shear:	1	'- 1"	1.2	25D + 1.5L	1.00	713 lb	5526 lb	Passed - 13%
SUPP	ORT AND RE	ACTION	INFORMA	TION					
ID	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member		Result
1	3-08	1.25D +	1.5L	1.00	1011 lb		6370 lb	3767 lb	Passed - 27%
2	3-00	1.25D +	1.5L	1.00	851 lb		5460 lb	3230 lb	Passed - 26%
SPECIFIED LOADS									
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 8 1/2"	Self Wei	ght	Тор	5 lb/ft	-	-	-
Uniform	0'	3'- 8 1/2"	FC1 Floor D (Plan View		Тор	5 lb/ft	10 lb/ft	-	-
Uniform	-	3'- 5"	User Lo	ad	Back	120 lb/ft	240 lb/ft	-	-
Point	3'- 6 3/4"	3'- 6 3/4"	E44(i693	3)	Тор	12 lb	-	-	-
UNFA	CTORED RE	ACTIONS							
ID	Start Loc	End Loc	So	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBC	12(i48)		237 lb	456 lb	-	-
2	3'- 5 1/2"	3'- 8 1/2"	E4	l(i42)		222 lb	403 lb	-	-
DESIG	GN NOTES								



ANALYSIS RESULTS

- 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.



DWG # TF23051656

Town of Inniefii C

SYITE NODEL:

CITY:

BAYVIEW WWELLINGTON
ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: 1ST FLR FRAMING
Label: B11L - i8605

Type: B11L -

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

Report Version: 2021.03.26

Status:

Design
Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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

3-04-00

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'- 3/4"
- 615 psi Column @ 3'- 6 3/4"

ANAL	1515 KESUL	15							
D	esign Criteria	Locat	ion	Load	Combinatio	n LDF	Design	Limit	Result
Factored Pos. Moment: 2'- 3"		3"	1.25D + 1.5L		1.00	241 lb ft	11650 lb ft	Passed - 2%	
Factored Shear: 0'- 11 1/4"		1/4"	1.2	5D + 1.5L	1.00	323 lb	5526 lb	Passed - 6%	
SUPP	ORT AND RE	ACTION IN	FORMA	TION					
	Input Bearing Length	Controlling L Combination		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5	5L	1.00	329 lb		3185 lb	1883 lb	Passed - 17%
2	1-12	1.25D + 1.5	5L	1.00	279 lb		3185 lb	1883 lb	Passed - 15%
SPECI	FIED LOADS	5							
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 7 1/2"	Self Weig	ht	Тор	5 lb/ft	-	-	-
Point	0'- 3"	0'- 3"	J4(i8584	-)	Front	36 lb	72 lb	-	-
Point	1'- 3"	1'- 3"	J4(i8598	3)	Front	37 lb	74 lb	-	-
Point	2'- 3"	2'- 3"	J4(i8598	3)	Front	37 lb	74 lb	-	-
Point	3'- 3"	3'- 3"	J4(i8599))	Front	28 lb	56 lb	-	-
UNFA	CTORED RE	ACTIONS							
ID	Start Loc	End Loc	So	ırce		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 1 3/4"	PBO	11(i47)		82 lb	146 lb	-	-
2	3'- 5 3/4"	3'- 7 1/2"	РВО	12(i48)		74 lb	130 lb	-	-
DESIG	N 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.



Town of inniefii C

52 Sylingenfold
MODEL:

CITY:

ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: 1ST FLR FRAMING Label: B12L - i8610

Type: **B12L** -

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

Report Version: 2021.03.26

Status:

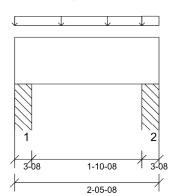
Design
Passed

05/25/2023 08:32

Passed - 1%

Illustration Not to Scale. Pitch: 0/12

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



1.25D + 1.5L

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: 2'- 1/4"

Factored Resistance of Support Material:

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

ANALI 313 RE301	-13										
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result					
Factored Pos. Momen	t: 1'- 2 3/4"	1.25D + 1.5L	1.00	19 lb ft	11650 lb ft	Passed - 0%					
Factored Shear:	1'- 4 1/2"	1.25D + 1.5L	1.00	6 lb	5526 lb	Passed - 0%					
SUPPORT AND REACTION INFORMATION											
Input ID Bearing	Controlling Load	Factored LDF Downward	Factored Uplift	Factored Resistance	Factored Resistance	Result					

Reaction

of Member

6370 lb

of Support

3767 lb

Reaction

46 lb

1.00

2	3-08	1.25D +	1.5L 1.00	47 lb		6370 lb	3767 lb	Passed - 1%
SPECIF	IED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	2'- 5 1/2"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	0'	2'- 2"	FC1 Floor Decking (Plan View Fill)	Тор	8 lb/ft	15 lb/ft	-	-
Uniform	2'- 2"	2'- 5 1/2"	FC1 Floor Decking (Plan View Fill)	Тор	8 lb/ft	17 lb/ft	-	-
LINEAC	TOPED PE	ACTIONS						

UNFA	JNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 3 1/2"	PBO10(i46)	15 lb	18 lb	-	-					
2	2'- 2"	2'- 5 1/2"	PBO11(i47)	15 lb	19 lb	-	-					

DESIGN NOTES

Length

3-08

1

- 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
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 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.



SY ipenfold MODEL:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 **INNISFIL** Job Name: RL-4

Level: **1ST FLR FRAMING** Label: B13L - i8587 Type: **Beam**

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

Report Version: 2021.03.26

Status: Design Passed

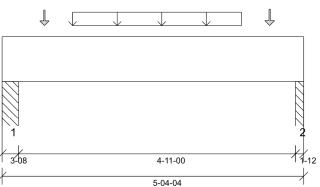
05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

CITY:

Designed by Single Member Design Engine in MiTek® Structure Version

8.5.3.233.Update5.15



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:

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

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Column @ 5'- 3 1/2"

ANALYSIS RESULTS							
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
Factored Pos. Moment:	2'- 9"	1.25D + 1.5L	1.00	836 lb ft	11650 lb ft	Passed - 7%	
Factored Shear:	4'- 5"	1.25D + 1.5L	1.00	606 lb	5526 lb	Passed - 11%	
Total Load (TL) Pos. Defl.:	2'- 9 1/16"	D + L		0.011"	L/240	Passed - L/999	
CURRORT AND DEACH	FIGN INFORM	ATION					а

ı	SUPP	ORT AND R	EACTION	INFORMA	VIION					
		Length			LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
ı	1	1 3-08 1.25D + 1.5L		1.5L	1.00	592 lb		6370 lb	3767 lb	Passed - 16%
,	2	1-12	1.25D +	1.5L	1.00	612 lb		3185 lb	1883 lb	Passed - 32%
١	SPECIFIED LOADS									
ı	Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	5'- 4 1/4"	Self Wei	ght	Тор	5 lb/ft	-	-	-
ı	Uniform	1'- 3"	4'- 3"	Smoothed	Load	Front	59 lb/ft	117 lb/ft	-	-
ı	Point	0'- 9"	0'- 9"	J3(i858	2)	Front	47 lb	94 lb	-	-
ı	Point	4'- 9"	4'- 9"	J3(i858	9)	Front	53 lb	106 lb	-	-
ı	UNFA	CTORED RI	EACTIONS							
ı	ID	Start Loc	End Loc	Sc	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)

148 lb

154 lb

268 lb

283 lb

DESIGN NOTES

5'- 2 1/2"

0'- 3 1/2"

5'- 4 1/4"

The dead loads used in the design of this member were applied to the structure as sloped dead loads.

PBO7(i43)

PBO10(i46)

- 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.



MODEL:

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 **INNISFIL** Job Name: RL-4

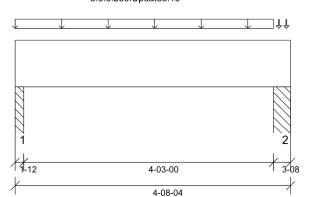
Level: **1ST FLR FRAMING** Label: B14L - i8603 Type: **Beam**

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 08:32

DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

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

Factored Resistance of Support Material:

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

ANAL	YSIS RESUL	15								
De	esign Criteria	Loc	ation	Load	Combinatio	n LDF	Design	Limit	Result	
Factored	Pos. Moment:	2'- 3	3 1/8"	1.2	25D + 1.5L	0.96	78 lb ft	11168 lb ft	Passed - 1%	
Factored	Shear:	3'- 7	7 1/4"	1.2	25D + 1.5L	0.96	43 lb	5298 lb	Passed - 1%	
SUPPO	ORT AND RE	ACTION	INFORMA	TION						
	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result	
1	1-12	1.25D + 1	1.5L	0.96	77 lb		3053 lb	1806 lb	Passed - 4%	
2	3-08	1.25D + 1	1.5L	0.96	93 lb		6107 lb	3611 lb	Passed - 3%	
SPECIFIED LOADS										
Type	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)	
Self Weight	0'	4'- 8 1/4"	Self Weig		Тор	5 lb/ft	-	-	-	
Uniform	0'	4'- 4 3/4"	FC1 Floor De (Plan View		Тор	6 lb/ft	12 lb/ft	-	-	
Point	4'- 5 7/8"	4'- 5 7/8"	9(i259)	,	Тор	11 lb	-	-		
Point	4'- 7 3/8"	4'- 7 3/8"	9(i259)		Тор	7 lb	-	-	-	
UNFAC	CTORED RE	ACTIONS								
ID	Start Loc	End Loc	So	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)	
1	0'	0'- 1 3/4"	PBC	9(i45)		26 lb	30 lb	-	-	
2	4'- 4 3/4"	4'- 8 1/4"	PBC	8(i44)		43 lb	27 lb	-	-	
DESIG	N 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.



SM-ipenfold MODEL:

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 **INNISFIL**

Job Name: RL-4

Level: **1ST FLR FRAMING** Label: B15L - i8583 Type: **Beam**

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

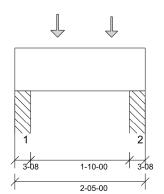
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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



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:

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

Factored Resistance of Support Material:

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

ANAL	YSIS RESUL	TS							
	Design Criteria	Loca	ation	Load	Combinatio	n LDF	Design	Limit	Result
Factore	d Pos. Moment:	0'- 9	1/2"	1.2	25D + 1.5L	1.00	229 lb ft	11650 lb ft	Passed - 2%
Factore	d Shear:	1'-	4"	1.2	25D + 1.5L	1.00	422 lb	5526 lb	Passed - 8%
SUPP	ORT AND RE	ACTION I	NFORM <i>A</i>	NOITA					
ID	Input Bearing Length	Controlling Combinat		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member		Result
1	3-08	1.25D + 1	.5L	1.00	397 lb		6370 lb	3767 lb	Passed - 11%
2	3-08	1.25D + 1	.5L	1.00	428 lb		6370 lb	3767 lb	Passed - 11%
SPEC	IFIED LOAD	S							
Туре	Start Loc	End Loc	Source	•	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	2'- 5"	Self Wei	ght	Тор	5 lb/ft	-	-	-
Point	0'- 9 1/2"	0'- 9 1/2"	J2(i859	7)	Front	104 lb	208 lb	-	-
Point	1'- 9 1/2"	1'- 9 1/2"	J2(i858	1)	Front	87 lb	173 lb	-	-
UNFA	CTORED RE	ACTIONS							
ID	Start Loc	End Loc	Sc	ource		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBC	013(i50)		97 lb	183 lb	-	-
2	2'- 1 1/2"	2'- 5"	PB	O9(i45)		105 lb	198 lb	-	-
DESIG	GN 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.
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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.



Town of inniefii

SUILDER.

MODEL:

CITY:

BAYVIEW WWELLINGTON
ALCONA SHORES

RL-4

INNISFIL

Job Name: RL-4

| Level: 1ST FLR FRAMING | Label: B16L - i8588 | Type: Beam

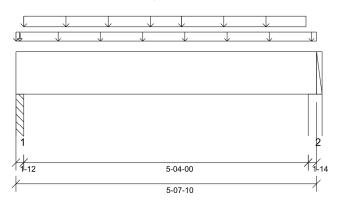
2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL Status:

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 08:32



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: 5'- 5 3/4"

Factored Resistance of Support Material:

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

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.

11	[Design Criteria	Lo	cation	Load	Combination	LDF	Design	Limit	Result
П	Factore	d Pos. Momen	: 2'-	9 3/4"	1.2	25D + 1.5L	0.69	741 lb ft	16066 lb ft	Passed - 5%
Ш	Factore	d Shear:	4'-	8 1/4"	1.2	25D + 1.5L	0.69	368 lb	7621 lb	Passed - 5%
П	SUPP	ORT AND R	EACTION	INFORM.	ATION					
	ID	Input Bearing Length	Controlling Combin		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member		Result
Ш	1	1-12	1.25D +	1.5L	0.69	551 lb		4392 lb	2597 lb	Passed - 21%
Ш	2	1-14	1.25D +	1.5L	0.69	535 lb		4706 lb	2784 lb	Passed - 19%
II	SPEC	IFIED LOAD	S							
Ш	Type	Start Loc	End Loc	Source	е	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Ш	Self Weight	0'	5'- 7 5/8"	Self We	eight	Тор	9 lb/ft	-	-	-
II	Uniform	0'	5'- 7 5/8"	FC1 Floor I (Plan Vie		Тор	14 lb/ft	28 lb/ft	-	-
Ш	Uniform	0'- 1 3/4"	3'- 1 1/4"	9(i25	9)	Тор	101 lb/ft	-	-	-
Ш	Uniform		5'- 5 1/4"	8(i25	,	Тор	101 lb/ft	-	-	-
Ц	Point	0'- 7/8"	0'- 7/8"	9(i25	9)	Тор	7 lb	-	-	-
Ш	UNFA	CTORED RE	ACTIONS	S						
Ш	ID	Start Loc	End Loc	S	ource		Dead (D)	Live (L)	Snow (S)	Wind (W)
Ш	1	0'	0'- 1 3/4"	PE	8O7(i43)		340 lb	81 lb	-	-
Ш	2	5'- 5 3/4"	5'- 7 5/8"	E	4(i42)		335 lb	81 lb	-	-

DESIGN NOTES

ANALYSIS RESULTS

- 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.



DWG # TF23051662

Town of inniefii

53 AM-jipenfold MODEL:

CITY:

BAYVIEW WWELLINGTON
ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: 3RD FLR FRAMING
Label: B27 - i7793

Label: **B27 - i7** Type: **Beam**

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

Report Version: 2021.03.26

Status:

Design
Passed

05/25/2023 08:32

Result

Passed - 2%

Passed - 16%

Result

Passed - 11%

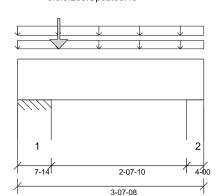
Passed - 4%

Wind (W)

Wind (W)

Illustration Not to Scale. Pitch: 0/12

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



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: 2'- 8 1/8"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 6 7/8"
- 615 psi Wall @ 3'- 4 1/2"

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.

Ш	ANALI	SIS KESUL	10						
ı	De	esign Criteria	Loc	ation	Load	Combinatio	n LDF	Design	Limit
ı	Factored	Pos. Moment:	0'- 10	9/16"	1.2	25D + 1.5L	1.00	399 lb ft	23299 lb ft
	Factored	Shear:	1'- 5	5 3/8"	1.2	25D + 1.5L	1.00	1734 lb	11052 lb
I	SUPPO	ORT AND RE	ACTION	INFORM	NOITA				
		Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	
ı	1	7-14	1.25D +	1.5L	1.00	1921 lb		28665 lb	16957 lb
	2	4-00	1.4D		0.65	237 lb		9464 lb	5598 lb
ı	SPECI	FIED LOADS	S						
ı	Type	Start Loc	End Loc	Source	Э	Face	Dead (D)	Live (L)	Snow (S)
	Self Weight	0'	3'- 7 1/2"	Self We	ight	Тор	9 lb/ft	-	-
ı	Uniform	0'	3'- 7 1/2"	User Lo		Тор	60 lb/ft	-	-
	Uniform	-0'	3'- 7 1/2"	FC6 Floor D (Plan Viev		Тор	10 lb/ft	20 lb/ft	-
I	Point	0'- 9 5/8"	0'- 9 5/8"	B33(i78	03)	Back	510 lb	780 lb	-
	UNFAC	CTORED RE	ACTIONS						
ı	ID	Start Loc	End Loc	S	ource		Dead (D)	Live (L)	Snow (S)
	1	0'	0'- 7 7/8"	14	1(i990)		671 lb	821 lb	-
П	2	3'- 3 1/2"	3'- 7 1/2"	13	3(i989)		127 lb	31 lb	-

DESIGN NOTES

ANALYSIS RESULTS

- 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 Inniofil Gertified

100 100 2 8:56:53 All ingenfold

MODEL:

Street Modes AVVIEW WWELLINGTON

RL-4 INNISFIL Job Name: RL-4

Level: 3RD FLR FRAMING Label: B33 - i7803

Type: Beam

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

Report Version: 2021.03.26

Status:

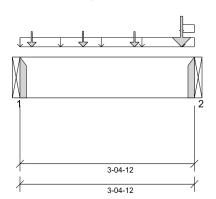
Design
Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

CITY:

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



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'- 4 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 # TF23051664 PG 1/2

	ANALYSIS RESULTS							
٦	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
1	Factored Pos. Moment:	1'- 11 7/8"	1.25D + 1.5L + S	1.00	1457 lb ft	23299 lb ft	Passed - 6%	
١	Factored Shear:	0'- 9 1/2"	1.25D + 1.5L + S	1.00	1002 lb	11052 lb	Passed - 9%	

SUP	PORT AND	D REACTION INFORM	ATION					
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 + S	1.00	1863 lb		5460 lb	-	Passed - 34%
2	1-08	1.25D + 1.5L + S	1.00	2455 lb		5460 lb	-	Passed - 45%

٧	JUN	INECTOR	NFORMATION				
	ID Part No. Manufacturer	Manufacturar	Na	iling Requirem	ents	Other Information or Requirement for	
	טו	Fait No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories
	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												
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)				
Self Weight	0'	3'- 4 3/4"	Self Weight	Тор	9 lb/ft	-	-	-				
Uniform	0'	3'- 4 3/4"	User Load	Top	60 lb/ft	-	-	-				
Uniform	3'- 1 3/4"	3'- 4 3/4"	FC6 Floor Decking (Plan View Fill)	Тор	3 lb/ft	6 lb/ft	-	-				
Point	0'- 2 3/4"	0'- 2 3/4"	J3(i7162)	Front	80 lb	159 lb	-	-				
Point	1'- 2 3/4"	1'- 2 3/4"	J3(i7343)	Front	100 lb	199 lb	-	-				
Point	2'- 2 3/4"	2'- 2 3/4"	J3(i7316)	Front	96 lb	191 lb	-	-				
Point	3'- 1 3/4"	3'- 1 3/4"	J3(i7065)	Front	69 lb	138 lb	-	-				
Point	0'- 2 3/4"	0'- 2 3/4"	J2(i7170)	Back	107 lb	213 lb	-	-				
Point	1'- 2 3/4"	1'- 2 3/4"	J2(i7093)	Back	112 lb	223 lb	-	-				
Point	2'- 2 3/4"	2'- 2 3/4"	J2(i7131)	Back	107 lb	214 lb	-	-				
Point	3'- 1 3/4"	3'- 1 3/4"	J2(i7145)	Back	236 lb	297 lb	432 lb	-				

Politi	3 - 1 3/4	3 - 1 3/4	J2(I7 145)	Dack 230 ID	297 10	432 ID	-						
UNFAC	UNFACTORED REACTIONS												
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)						
1	0'	0'	B27(i7793)	510 lb	780 lb	-	-						
2	3'- 4 3/4"	3'- 4 3/4"	STLBM()	634 lb	856 lb	432 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.
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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.

PLY TO PLY CONNECTION

BAYVIEW WWELLINGTON SYN inenfold ALCONA SHORES MODEL: RL-4

INNISFIL

CITY:

Level: **3RD FLR FRAMING** Label: B33 - i7803

Job Name: RL-4

Type: Beam

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

Status: Design **Passed**

PLY TO PLY CONNECTION



BAYVIEW WWELLINGTON SM-ipenfold ALCONA SHORES MODEL:

RL-4 INNISFIL Job Name: RL-4

Level: **3RD FLR FRAMING** B30 - i7289

Label: Type: **Beam**

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

Report Version: 2021.03.26

Status: Design Passed

05/25/2023 08:32

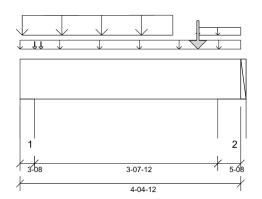
Result

Passed - 6%

Illustration Not to Scale. Pitch: 0/12

CITY:

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



Location

2'- 6 1/2"

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:

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

Factored Resistance of Support Material:

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

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.

Ш	Factored	d Shear:	1	'- 1"	1.25D + 1	.5L 1.00	1551 lb	11052 lb	Passed - 14%
Ш	SUPP	ORT AND R	EACTION	INFORMATIC	N				
	ID	Input Bearing Length	Controlling Combina		Factor F Down Read	ward Uplift	Resistance	Factored Resistance of Support	Result
Ш	1	3-08	1.25D +	1.5L 1.0	0 1650	O lb	12740 lb	7536 lb	Passed - 22%
Ш	2	5-08	1.25D +	1.5L 1.0	0 153	1 lb	20020 lb	11843 lb	Passed - 13%
Ш	SPEC	IFIED LOAD	s						
Ш	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Ш	Self Weight	0'	4'- 4 3/4"	Self Weight	Тор	9 lb/ft	-	-	-
Ш	Uniform	0'	4'- 4 3/4"	User Load	Тор	60 lb/ft	-	-	-
Ш	Uniform	3'- 6 1/2"	3'- 11 1/4"	FC6 Floor Deckir (Plan View Fill)	Гор	2 lb/ft	5 lb/ft	-	-
Ш	Uniform	3'- 11 1/4"	4'- 4 3/4"	FC6 Floor Deckir (Plan View Fill)		3 lb/ft	7 lb/ft	-	-
Ш	Tapered	0'- 1/2"	3'- 1/2"	Smoothed Load	l Back	166 To 167 lb/ft	331 To 335 lb/ft	-	-
Ш	Point	3'- 6 1/2"	3'- 6 1/2"	J1(i7280)	Back	155 lb	311 lb	-	-
Ш	Point	0'- 3 1/2"	0'- 3 1/2"	FC6 Floor Deckir (Plan View Fill)	Гор	1 lb	1 lb	-	-
Ш	Point	0'- 5"	0'- 5"	FC6 Floor Deckir (Plan View Fill)		1 lb	1 lb	-	-
	UNFA	CTORED R	EACTIONS	5					
	ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
П	1	0'	0'- 3 1/2"	15(i996	i)	492 lb	691 lb	-	-
	2	3'- 11 1/4"	4'- 4 3/4"	13(i989))	472 lb	627 lb	-	-
	DESIG	N NOTES							

LDF

1.00

Design

1440 lb ft

Limit

23299 lb ft

Load Combination

1.25D + 1.5L

ANALYSIS RESULTS

Design Criteria

Factored Pos. Moment:

- 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 Innisfii (

SULDER. 66

CITY:

BAYVIEW WWELLINGTON
ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: **3RD FLR FRAMING**Label: **B31 - i7707**

Label: **B31 - i7**Type: **Beam**

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

Report Version: 2021.03.26

Status:

Design
Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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

1 2

3-09-08

DESIGN II	NFORMA	TION
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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 Wall @ 0'- 2 1/2"
- 615 psi Wall @ 3'- 6 1/2"

	Design Criteria	Lo	cation	Load	Combinatio	n LDF	Design	Limit	Result	
Factored Pos. Moment: 2'- 2 3/4"			2 3/4"	1.25D + 1.5L		1.00	1377 lb ft	11650 lb ft	Passed - 12%	
Factore	d Shear:	2	'- 8"	1.2	25D + 1.5L	1.00	1708 lb	5526 lb	Passed - 31%	
SUPF	ORT AND R	EACTION	INFORMA	TION						
ID	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member		Result	
1	3-08	1.25D +	1.5L	1.00	2255 lb		6370 lb	3768 lb	Passed - 60%	
2	4-00	1.25D +	1.5L	1.00	1859 lb		7280 lb	4306 lb	Passed - 43%	
SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)	
Self Weight	0'	3'- 9 1/2"	Self Wei	ght	Тор	5 lb/ft	-	-	-	
Uniform	n -0'	3'- 9 1/2"	User Lo		Front	60 lb/ft	120 lb/ft	-	-	
Uniform	0'- 3 1/2"	1'- 2 3/4"	FC6 Floor D (Plan View		Тор	2 lb/ft	3 lb/ft	-	-	
Point	0'- 2 3/4"	0'- 2 3/4"	J4(i727	1)	Back	209 lb	417 lb	-	-	
Point	1'- 2 3/4"	1'- 2 3/4"	J4(i731	7)	Back	174 lb	348 lb	-	-	
Point	2'- 2 3/4"	2'- 2 3/4"	J4(i737	1)	Back	175 lb	350 lb	-	-	
Point	3'- 2 3/4"	3'- 2 3/4"	J4(i737	1)	Back	175 lb	350 lb	-	-	
Point	0'- 3 1/2"	0'- 3 1/2"	FC6 Floor D (Plan View		Тор	1 lb	2 lb	-	-	
UNFA	CTORED RE	ACTIONS	6							

Dead (D)

552 lb

429 lb

Live (L)

1084 lb

841 lb

Snow (S)

Wind (W)

DESIGN NOTES

Start Loc

3'- 5 1/2"

End Loc

0'- 3 1/2'

3'- 9 1/2"

ID

ANALYSIS RESULTS

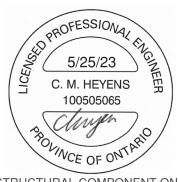
• The dead loads used in the design of this member were applied to the structure as sloped dead loads.

Source

17(i998)

16(i995)

- 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 # TF23051666

MODEL:

SY ipenfold

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: **3RD FLR FRAMING** B28 - i8095

Label: Type: **Beam**

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

WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:32 8.5.3.233.Update5.15 9-04-00

9-09-08

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:

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

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Wall @ 9'- 5"

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 # TF23051667

	ANALYSIS RESULTS							
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
l	Factored Pos. Moment:	4'- 11 15/16"	1.25D + 1.5S + L	1.00	11760 lb ft	23299 lb ft	Passed - 50%	
l	Factored Shear:	0'- 9 1/2"	1.25D + 1.5S + L	1.00	4167 lb	11052 lb	Passed - 38%	
l	Live Load (LL) Pos. Defl.:	4'- 8 13/16"	S + 0.5L		0.151"	L/360	Passed - L/739	
l	Total Load (TL) Pos. Defl.:	4'- 8 3/4"	D + S + 0.5L		0.257"	L/240	Passed - L/436	

l	SUP	PORT AND	REACTION INFORM	ATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
l	1	1-08	1.25D + 1.5S + L	1.00	4621 lb		5460 lb	-	Passed - 85%
l	2	5-08	1.25D + 1.5S + L	1.00	4356 lb		20020 lb	11843 lb	Passed - 37%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for
טו	Fait No.	Manuacturei	Тор	Face	Member	Reinforcement Accessories
1	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.

SPECIF	SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	0'	9'- 9 1/2"	Self Weight	Тор	9 lb/ft	-	-	-			
Uniform	-0'	9'- 9 1/2"	E37(i2533)	Top	81 lb/ft	-	-	-			
Uniform	-0'	5'- 10 1/4"	E37(i2533)	Top	76 lb/ft	-	244 lb/ft	-			
Uniform	0'- 8 1/4"	5'- 3 1/4"	Smoothed Load	Front	103 lb/ft	205 lb/ft	-	-			
Uniform	5'- 10 1/4"	9'- 9 1/2"	E37(i2533)	Top	36 lb/ft	-	132 lb/ft	-			
Uniform	6'- 2 1/4"	8'- 11 1/4"	Smoothed Load	Front	103 lb/ft	205 lb/ft	-	-			
Point	0'- 2 3/4"	0'- 2 3/4"	J3(i7388)	Front	70 lb	140 lb	-	-			
Point	5'- 8 3/4"	5'- 8 3/4"	J3(i7468)	Front	94 lb	188 lb	-	-			
Point	5'- 7 3/16"	5'- 7 3/16"	E37(i2533)	Тор	210 lb	-	651 lb	-			

UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'	STLBM()	1317 lb	965 lb	1319 lb	-					
2	9'- 4"	9'- 9 1/2"	E48(i8098)	1280 lb	867 lb	1281 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

SM-ipenfold

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES MODEL:

RL-4 INNISFIL Job Name: RL-4

Level: 2ND FLR FRAMING B20 - i8301

Label: Type: **Beam**

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

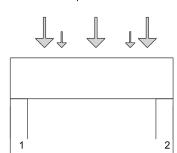
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 08:32

Result

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



2-06-00

3-02-00

Controlling Load

Combination

4-00

DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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'- 6 1/4"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3"
- 615 psi Wall @ 2'- 11"

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.

PROFESSIONAL
5/25/23 C. M. HEYENS
C. M. HEYENS THE 100505065
3 Charger
TO VINCE OF ONT ARIO
STRUCTURAL COMPONENT ONL

DWG # TF23051668

ı	ANALYSIS RESULT	rs					
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	1'- 8"	1.25D + 1.5L	1.00	879 lb ft	23299 lb ft	Passed - 4%
l	Factored Shear:	2'- 1/2"	1.25D + 1.5L	1.00	1401 lb	11052 lb	Passed - 13%
ı	SUPPORT AND RE	ACTION INFORM	ATION				
١	Input	Controlling Load	Factored	Factored	Factored	Factored	

Uplift

Reaction

Resistance

of Member

Resistance

of Support

Downward

Reaction

LDF

4-00

	4-00 4-00	1.25D + 1 1.25D + 1		1250 I 1414 I	-	14560 lb 14560 lb	8613 lb 8613 lb	Passed - 15% Passed - 16%
SPECIF	IED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 2"	Self Weight	Тор	9 lb/ft	-	-	-
Point	1'	1'	J3(i8373)	Front	61 lb	122 lb	-	-
Point	2'- 4"	2'- 4"	J3(i8372)	Front	61 lb	122 lb	-	-
Point	0'- 8"	0'- 8"	J4(i8472)	Back	165 lb	331 lb	-	-
Point	1'- 8"	1'- 8"	J4(i8465)	Back	165 lb	331 lb	-	-
Point	2'- 8"	2'- 8"	J4(i8354)	Back	165 lb	331 lb	-	-
UNFAC	TORED RE	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4"	6(i245)		289 lb	549 lb	-	-
2	2'- 10"	3'- 2"	4(i244)		358 lb	688 lb	-	-

DESIGN NOTES

Bearing

Length

ID

- · 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.
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- 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 Invient Certified

with the 2 8:56:54 Sylphenfold

MODEL:

EUILGE Modes AYVIEW WWELLINGTON

MODEL: RL-4
CITY: INNISFIL

Job Name: **RL-4**

Level: 2ND FLR FRAMING

Label: **B21 - i8334** Type: **Beam**

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

WestFraser LVL

Status: **Design**

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 08:32

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: 16'- 1/4"

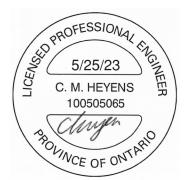
Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 1/2"
- 615 psi Wall @ 16'- 5 5/8"

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.



STRUCTURAL COMPONENT ONLY DWG # TF23051669 PG 1/2

ANALYSIS RESULTS									
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result			
Factored Pos. Moment:	10'- 5 13/16"	1.25D + 1.5L	0.99	12808 lb ft	34527 lb ft	Passed - 37%			
Factored Shear:	15'- 7 1/8"	1.25D + 1.5L	0.99	4077 lb	16378 lb	Passed - 25%			
Live Load (LL) Pos. Defl.:	8'- 9 7/16"	L		0.249"	L/360	Passed - L/776			
Total Load (TL) Pos. Defl.:	8'- 9 3/8"	D + L		0.548"	L/240	Passed - L/352			
Permanent Deflection:	8'- 9 5/16"			-	L/360	Passed - L/666			
SUPPORT AND REACTION INFORMATION									

SUP	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	0.99	2149 lb		18879 lb	11168 lb	Passed - 19%				
2	5-08	1.25D + 1.5L	0.99	5675 lb		29667 lb	17549 lb	Passed - 32%				

SPECIFIED LOADS									
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)	
Self Weight	0'	16'- 10 1/8"	Self Weight	Тор	14 lb/ft	-	-	-	
Uniform	0'	16'- 7 3/8"	FC5 Floor Decking (Plan View Fill)	Тор	7 lb/ft	14 lb/ft	-	-	
Uniform	0'	16'- 5 1/2"	FC5 Floor Decking (Plan View Fill)	Тор	13 lb/ft	26 lb/ft	-	-	
Uniform	7'- 1 1/2"	11'- 7/8"	14(i990)	Top	81 lb/ft	-	-	-	
Uniform	10'- 3 7/8"	11'- 7/8"	14(i990)	Top	895 lb/ft	1095 lb/ft	-	-	
Uniform	13'- 8 1/2"	16'- 10 1/8"	13(i989)	Top	81 lb/ft	-	-	-	
Uniform	13'- 8 1/2"	14'- 5 1/2"	13(i989)	Top	169 lb/ft	41 lb/ft	-	-	
Uniform	14'- 1/2"	16'- 10 1/8"	13(i989)	Top	60 lb/ft	-	-	-	
Uniform	15'- 10"	16'- 10 1/8"	13(i989)	Top	354 lb/ft	470 lb/ft	-	-	
Uniform	15'- 11 3/4"	16'- 10 1/8"	13(i989)	Top	0 lb/ft	0 lb/ft	-	-	
Uniform	16'- 5 1/2"	16'- 10 1/8"	FC5 Floor Decking (Plan View Fill)	Тор	6 lb/ft	12 lb/ft	-	-	
Point	16'- 4 5/8"	16'- 4 5/8"	B23(i8448)	Front	324 lb	630 lb	-	-	
Point	0'- 1 3/4"	0'- 1 3/4"	E25(i988)	Top	114 lb	100 lb	-	-	
Point	16'- 4 5/8"	16'- 4 5/8"	FC5 Floor Decking (Plan View Fill)	Тор	23 lb	47 lb	-	-	
Point	16'- 8 3/4"	16'- 8 3/4"	FC5 Floor Decking (Plan View Fill)	Тор	1 lb	2 lb	-	-	
Point	16'- 8 15/16"	16'- 8 15/16"	13(i989)	Тор	1 lb	2 lb	-	-	

	UNFACTORED REACTIONS										
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)			
	1	0'	0'- 3 1/2"	E18(i254)	833 lb	733 lb	-	-			
ı	2	16'- 4 5/8"	16'- 10 1/8"	6(i245)	2099 lb	2040 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.

BAYVIEW WWELLINGTON SY inenfold ALCONA SHORES MODEL: RL-4

INNISFIL

CITY:

Level: **2ND FLR FRAMING** Label: B21 - i8334 Beam

Job Name: RL-4

Type:

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

Status: Design **Passed**

PLY TO PLY CONNECTION



MODEL:

SM-ipenfold

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: 2ND FLR FRAMING

Label: B22 - i8498 Type: **Beam**

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

Status: Design Passed

CITY: Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:32 8.5.3.233.Update5.15 16-11-08 17-06-08

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:

Bottom: 16'- 1/4" Top: 0'

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 1/2"
- 615 psi Column @ 17'- 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 # TF23051670

1	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	9'- 1 15/16"	1.25D + 1.5L	1.00	6865 lb ft	23299 lb ft	Passed - 29%
l	Factored Neg. Moment:	17'- 4"	1.25D + 1.5L	1.00	98 lb ft	17749 lb ft	Passed - 1%
١	Factored Shear:	16'- 5 1/2"	1.25D + 1.5L	1.00	2824 lb	11052 lb	Passed - 26%
١	Live Load (LL) Pos. Defl.:	9'- 1 13/16"	L		0.229"	L/360	Passed - L/889
l	Total Load (TL) Pos. Defl.:	8'- 10 15/16"	D + L		0.566"	L/240	Passed - L/359
l	Permanent Deflection:	8'- 9 1/16"			-	L/360	Passed - L/620

SUP	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	1811 lb		12740 lb	7536 lb	Passed - 24%				
2	3-08	1.25D + 1.5L	1.00	5992 lb		12740 lb	7534 lb	Passed - 80%				

SPECIF	FIED LOAD	วร								
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weight	0'	17'- 6 1/2"	Self Weight	Тор	9 lb/ft	-	-	-		
Uniform	-0'	16'- 5 1/2"	FC5 Floor Decking (Plan View Fill)	Тор	20 lb/ft	40 lb/ft	-	-		
Uniform	0'- 3 1/2"	11'- 1/2"	User Load	Тор	60 lb/ft	-	-	-		
Uniform	15'- 2 1/2"	17'- 6 1/2"	User Load	Top	60 lb/ft	-	-	-		
Uniform	16'- 4"	17'- 3"	15(i996)	Тор	66 lb/ft	1 lb/ft	-	-		
Uniform	16'- 4"	17'- 2"	15(i996)	Тор	590 lb/ft	829 lb/ft	-	-		
Uniform	16'- 7 3/4"	17'- 3"	15(i996)	Тор	70 lb/ft	15 lb/ft	-	-		
Point	16'- 4 5/8"	16'- 4 5/8"	B23(i8448)	Back	373 lb	727 lb	-	-		
Point	0'- 1 3/4"	0'- 1 3/4"	E25(i988)	Тор	91 lb	97 lb	-	-		
Point	16'- 4 5/8"	16'- 4 5/8"	FC5 Floor Decking (Plan View Fill)	Тор	16 lb	32 lb	-	-		
Point	17'- 4 3/4"	17'- 4 3/4"	User Load	Top	350 lb	700 lb	-	-		
Point	17'- 4 3/4"	17'- 4 3/4"	16(i995)	Тор	38 lb	2 lb	-	-		
UNFAC	UNFACTORED REACTIONS									

ONIA	ON ACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 3 1/2"	E18(i254)	840 lb	514 lb	-	-					
2	17'- 3"	17'- 6 1/2"	PBO17(i251)	1903 lb	2403 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 Innisfii (

SUILBER. OR E

BAYVIEW WWELLINGTON
ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: **2ND FLR FRAMING**Label: **B23 - i8448**

Type: **B23 - R**

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

Report Version: 2021.03.26

Status:

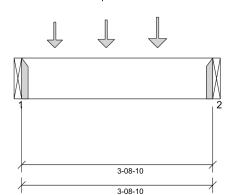
Design
Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

CITY:

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



DECICN	INFORMATION	п
DESIGN	INFORMATION	н

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'- 11 5/8"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 3'- 8 5/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 7 3/4"	1.25D + 1.5L	1.00	1703 lb ft	11650 lb ft	Passed - 15%
Factored Shear:	2'- 11 1/8"	1.25D + 1.5L	1.00	1345 lb	5526 lb	Passed - 24%
Total Load (TL) Pos. Defl.:	1'- 10 1/4"	D + L		0.012"	L/240	Passed - L/999

l	SUP	PORT AND	REACTION INFORM	IATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
l	1	1-08	1.25D + 1.5L	1.00	1556 lb		2730 lb	-	Passed - 57%
l	2	1-08	1.25D + 1.5L	1.00	1350 lb		2730 lb	-	Passed - 49%

COI	NNECTOR II	NFORMATION				
ID	Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for
טו	rait No.	Manuacturer	Тор	Face	Member	Reinforcement Accessories
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.

SPECIF	FIED LOAD)S						
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 8 5/8"	Self Weight	Тор	5 lb/ft	-	-	-
Point	0'- 7 3/4"	0'- 7 3/4"	J1(i8345)	Back	200 lb	400 lb	-	-
Point	1'- 7 3/4"	1'- 7 3/4"	J1(i8344)	Back	224 lb	448 lb	-	-
Point	2'- 7 3/4"	2'- 7 3/4"	J1(i8343)	Back	255 lb	509 lb	-	-
UNFAC	TORED RI	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B22(i8498)		373 lb	727 lb	-	-
2	3'- 8 5/8"	3'- 8 5/8"	B21(i8334)		324 lb	630 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.



DWG # TF23051671

BAYVIEW WWELLINGTON SM-ipenfold

CITY:

ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

2ND FLR FRAMING Level:

Label: B24 - i8539 Type: **Beam**

SUPPORT AND REACTION INFORMATION

Controlling Load

Combination

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

WestFraser LVL

Factored

Resistance

of Support

Result

Status:

Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:32 8.5.3.233.Update5.15 1 3-08 16-11-08 17-06-08

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:

Bottom: 15'- 3 1/4" Top: 0'

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 1/2"
- 615 psi Wall @ 17'- 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.



_							
l	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	10'- 1/4"	1.25D + 1.5L	1.00	4772 lb ft	23299 lb ft	Passed - 20%
l	Factored Neg. Moment:	17'- 4"	1.25D + 1.5L	1.00	141 lb ft	18257 lb ft	Passed - 1%
l	Factored Shear:	16'- 5 1/2"	1.25D + 1.5L	1.00	1963 lb	11052 lb	Passed - 18%
l	Live Load (LL) Pos. Defl.:	9'- 1 1/16"	L		0.223"	L/360	Passed - L/913
l	Total Load (TL) Pos. Defl.:	9'- 15/16"	D + L		0.381"	L/240	Passed - L/534

Factored

Uplift

Reaction

Factored

Resistance

of Member

Factored

Downward

Reaction

_								
1 2	3-08 3-08	1.25D + 1.25D +		1269 lb 4322 lb		12740 lb 12740 lb	7536 lb 7536 lb	Passed - 17% Passed - 57%
SPECI	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	17'- 6 1/2"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'	15'- 8 1/2"	FC5 Floor Decking (Plan View Fill)	Тор	21 lb/ft	41 lb/ft	-	-
Uniform	15'- 2 1/2"	17'- 6 1/2"	User Load	Тор	60 lb/ft	-	-	-
Uniform	15'- 8 1/2"	17'- 6 1/2"	FC5 Floor Decking (Plan View Fill)	Тор	12 lb/ft	23 lb/ft	-	-
Point	15'- 7 5/8"	15'- 7 5/8"	B25(i8278)	Front	302 lb	587/-1 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	E25(i988)	Тор	94 lb	103 lb	-	-
Point	17'- 4 3/4"	17'- 4 3/4"	User Load	Тор	350 lb	700 lb	-	-
Point	17'- 4 3/4"	17'- 4 3/4"	16(i995)	Тор	186 lb	327 lb	-	-
UNFAC	TORED R	EACTIONS	;					
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	E18(i254)		395 lb	520 lb	-	-
2	17'- 3"	17'- 6 1/2"	7(i253)		1189 lb	1887/-1 lb	-	-

DESIGN NOTES

Input

Bearing

Lenath

ID

- 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.

CITY:

BAYVIEW WWELLINGTON ALCONA SHORES

RL-4 INNISFIL Job Name: RL-4

Level: 2ND FLR FRAMING

Label: B25 - i8278 Type: **Beam**

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

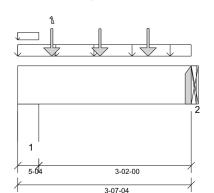
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 08:32

Illustration Not to Scale. Pitch: 0/12

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



DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

Bottom: 0'- 9" Top: 0'

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/4"
- 615 psi Beam @ 3'- 7 1/4"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 8 1/2"	1.25D + 1.5L	1.00	1240 lb ft	11650 lb ft	Passed - 11%
Factored Shear:	2'- 9 3/4"	1.25D + 1.5L	1.00	1053 lb	5526 lb	Passed - 19%
SLIDDODT AND DEAC	TION INFORM	MATION				

SUF	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	1.00	1705 lb		9555 lb	5652 lb	Passed - 30%					
2	1-08	1.25D + 1.5L	1.00	1259 lb		2730 lb	-	Passed - 46%					

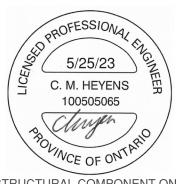
CONNECTOR INFORM <i>A</i>	

ID	Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for	
	Fait No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories	
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.

SPECIF	IED LOAD	S						
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 7 1/4"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	0'	3'- 7 1/4"	User Load	Top	60 lb/ft	120 lb/ft	-	-
Uniform	0'	0'- 5 1/4"	FC5 Floor Decking (Plan View Fill)	Тор	6 lb/ft	12 lb/ft	-	-
Point	0'- 8 1/2"	0'- 8 1/2"	J5(i8412)	Back	164 lb	308/-6 lb	-	-
Point	1'- 8 1/2"	1'- 8 1/2"	J5(i8447)	Back	156 lb	313 lb	-	-
Point	2'- 8 1/2"	2'- 8 1/2"	J5(i8451)	Back	160 lb	319 lb	-	-
UNFAC	TORED RE	EACTIONS	5					
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/4"	11(i257)		414 lb	792/-5 lb	-	-
2	3'- 7 1/4"	3'- 7 1/4"	B24(i8539)		302 lb	587/-1 lb	-	-
DESIC	INOTES							

- 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 # TF23051673

BAYVIEW WWELLINGTON SM-ipenfold ALCONA SHORES MODEL:

RL-4 INNISFIL Job Name: RL-4

Level: 2ND FLR FRAMING Label: B32 DR - i8470

Type: **Beam**

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

Report Version: 2021.03.26

Status: Design **Passed**

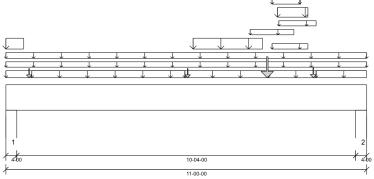
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Illustration Not to Scale. Pitch: 0/12

CITY:

Designed by Single Member Design Engine in MiTek® Structure Version

8.5.3.233.Update5.15



DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

Bottom: 11' Top: 11'

Factored Resistance of Support Material:

- 1334 psi Wall @ 0'- 3"
- 1334 psi Wall @ 10'- 9"

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.

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5/25/23 C. M. HEYENS
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STRUCTURAL COMPONENT ONLY DWG # TF23051674 PG 1/2

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 4 13/16"	1.25D + 1.5S + L	1.00	16864 lb ft	34949 lb ft	Passed - 48%
Factored Shear:	9'- 10 1/2"	1.25D + 1.5S + L	1.00	7035 lb	16578 lb	Passed - 42%
Live Load (LL) Pos. Defl.:	5'- 10 5/16"	S + 0.5L		0.161"	L/360	Passed - L/772
Total Load (TL) Pos. Defl.:	5'- 10 1/16"	D + S + 0.5L		0.303"	L/240	Passed - L/408
Permanent Deflection:	5'- 9 3/4"			-	L/360	Passed - L/894

SUP	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	4-00	1.25D + 1.5S + L	1.00	4907 lb		21840 lb	28022 lb	Passed - 22%				
2	4-00	1.25D + 1.5S + L	1.00	7248 lb		21840 lb	28022 lb	Passed - 33%				

SPECIF	IED LOAD)S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	11'	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	-0'	11'	J4(i8454)	Тор	13 lb/ft	20 lb/ft	-	-
Uniform	-0'	11'	R1(i8440)	Top	5 lb/ft	5 lb/ft	-	-
Uniform	-0'	0'- 9 1/2"	R1(i8440)	Тор	100 lb/ft	-	-	-
Uniform	-0'	0'- 6 1/2"	R1(i8440)	Top	75 lb/ft	-	244 lb/ft	-
Uniform	0'- 9 1/2"	5'- 5 1/2"	R1(i8440)	Тор	100 lb/ft	-	-	-
Uniform	5'- 5 1/2"	9'- 5 1/2"	R1(i8440)	Top	100 lb/ft	-	-	-
Uniform	5'- 8 1/2"	7'- 9 7/8"	R1(i8440)	Top	75 lb/ft	-	244 lb/ft	-
Uniform	7'- 5 3/8"	8'- 9 3/8"	R1(i8440)	Тор	4 lb/ft	7 lb/ft	-	-
Uniform	8'- 1 3/8"	9'- 2 1/2"	R1(i8440)	Top	4 lb/ft	8 lb/ft	-	-
Uniform	8'- 1 3/8"	8'- 11 7/8"	R1(i8440)	Top	16 lb/ft	26 lb/ft	-	-
Uniform	8'- 3 3/8"	9'- 2 1/2"	R1(i8440)	Тор	117 lb/ft	-	132 lb/ft	-
Uniform	8'- 3 7/8"	9'- 5 1/2"	R1(i8440)	Top	2 lb/ft	3 lb/ft	-	-
Uniform	9'- 5 1/2"	11'	R1(i8440)	Тор	100 lb/ft	-	-	-
Point	0'- 8 1/2"	0'- 8 1/2"	R1(i8440)	Тор	233 lb	-	632 lb	-
Point	5'- 6 1/2"	5'- 6 1/2"	R1(i8440)	Top	232 lb	-	628 lb	-
Point	7'- 11 5/8"	7'- 11 5/8"	R1(i8440)	Top	1280 lb	867 lb	1281 lb	-
Point	9'- 4 1/2"	9'- 4 1/2"	R1(i8440)	Тор	571 lb	131 lb	495 lb	-

UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 4"	E11(i237)	1604 lb	392 lb	1672 lb	-					
2	10'- 8"	11'	E28(i1750)	2501 lb	923 lb	2135 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.

Town of Incient Certified Models AVVIEW WWELLINGTON

ALL CONA SHORES

MODEL: RL-4

INNISFIL

CITY:

 Job Name:
 RL-4

 Level:
 2ND FLR FRAMING

 Label:
 B32 DR - i8470

 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.



SM-ipenfold

CITY:

BAYVIEW WELLINGTON ALCONA SHORES

RL-4 **INNISFIL** Job Name: RL-4

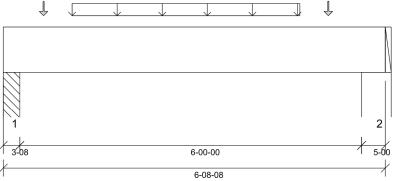
Type:

Level: **1ST FLR FRAMING** Label: B17L - i3812 **Beam**

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

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:27 8.5.3.233.Update5.15



DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

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

Factored Resistance of Support Material:

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

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 8 1/2"	1.25D + 1.5L	1.00	909 lb ft	11650 lb ft	Passed - 8%
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	561 lb	5526 lb	Passed - 10%
Live Load (LL) Pos. Defl.:	3'- 3 1/2"	L		0.012"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 3 1/2"	D + L		0.018"	L/240	Passed - L/999

ı	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		
l	1	3-08	1.25D + 1.5L	1.00	568 lb		6370 lb	3767 lb	Passed - 15%		
l	2	5-00	1.25D + 1.5L	1.00	547 lb		9100 lb	5383 lb	Passed - 10%		
١	SPECIFIED LOADS										

Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 8 1/2"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	1'- 2 1/2"	5'- 2 1/2"	Smoothed Load	Front	44 lb/ft	88 lb/ft	-	-
Point	0'- 8 1/2"	0'- 8 1/2"	J3(i4058)	Front	37 lb	75 lb	-	-
Point	5'- 8 1/2"	5'- 8 1/2"	J3(i4053)	Front	40 lb	79 lb	-	-

ı	UNFA	S I OKED KI	EACTIONS					
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
	1	0'	0'- 3 1/2"	PBO16(i91)	144 lb	258 lb	-	-
	2	6'- 3 1/2"	6'- 8 1/2"	W15(i85)	140 lb	248 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.



BAYVIEW WELLINGTON ALCONA SHORES

MODEL: RL-4 **INNISFIL** Job Name: RL-4

Level: **1ST FLR FRAMING** Label: B18L - i3813 Type: **Beam**

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

Report Version: 2021.03.26

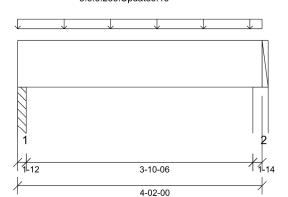
Status: Design Passed

05/25/2023 08:27

Illustration Not to Scale. Pitch: 0/12

CITY:

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



DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

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

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3/4"
- 615 psi Wall @ 4'- 1 1/8"

ANALYSIS RESULTS												
	Design Criteria	Loc	cation	Load	Combinatio	n LDF	Design	Limit	Result			
Factore	d Pos. Moment:	2'- ′	2'- 15/16" 1.2		25D + 1.5L	1.00	98 lb ft	11650 lb ft	Passed - 1%			
Factore	d Shear:	0'- 11 1/4" 1		1.2	25D + 1.5L	1.00	55 lb	5526 lb	Passed - 1%			
SUPPORT AND REACTION INFORMATION												
ID	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member		Result			
1	1-12	1.25D +	1.5L	1.00	107 lb		3185 lb	1883 lb	Passed - 6%			
2	1-14	1.25D +	1.5L	1.00	105 lb		3413 lb	2019 lb	Passed - 5%			
SPEC	IFIED LOADS	3										
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	0'	4'- 2"	Self Weig	jht	Тор	5 lb/ft	-	-	-			
Uniform	0'	4'- 2"	FC3 Floor De (Plan View		Тор	10 lb/ft	20 lb/ft	-	-			
UNFA	CTORED RE	ACTIONS										
ID	Start Loc	End Loc	So	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)			
1	0'	0'- 1 3/4"	PBO	15(i87)		32 lb	44 lb	-	-			
2	4'- 1/8"	4'- 2"	E9	(i90)		32 lb	44 lb	-	-			
DESI	GN 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.



SM-ipenfold

CITY:

BAYVIEW WELLINGTON ALCONA SHORES

RL-4 **INNISFIL** Job Name: RL-4

Level: **1ST FLR FRAMING** Label: B19L - i3880

Type: **Beam** 1 Ply Member

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

Design Passed

Status:

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 08:27 8.5.3.233.Update5.15 5-08 6-06-08 7-03-08

DESIGN INFORMATION

NBCC 2015, Part9, BCBC 2018, **Building Code:** 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:

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

Factored Resistance of Support Material:

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

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 3 1/2"	1.25D + 1.5L	1.00	1055 lb ft	11650 lb ft	Passed - 9%
Factored Shear:	6'- 2 1/2"	1.25D + 1.5L	1.00	580 lb	5526 lb	Passed - 11%
Live Load (LL) Pos. Defl.:	3'- 8 7/8"	L		0.016"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 8 7/8"	D + L		0.025"	L/240	Passed - L/999

l	SUP	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				
l	1	5-08	1.25D + 1.5L	1.00	841 lb		10010 lb	5921 lb	Passed - 14%				
l	2	3-08	1.25D + 1.5L	1.00	587 lb		6370 lb	3767 lb	Passed - 16%				
l	SPE	CIFIED LO	ADS										

ı									
l	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	7'- 3 1/2"	Self Weight	Тор	5 lb/ft	-	-	-
l	Uniform	0'- 9 1/2"	6'- 9 1/2"	Smoothed Load	Front	44 lb/ft	88 lb/ft	-	-
l	Point	0'- 2 3/4"	0'- 2 3/4"	5(i243)	Тор	83 lb	106 lb	-	-

UNFA	CTORED RI	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	1(i11)	235 lb	371 lb	-	-
2	7'	7'- 3 1/2"	PBO15(i87)	147 lb	263 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.







Maximum Floor Spans - S2.1

Design Criteria

Spans: Simple span

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

			В	are			1/2 in. gyp	sum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
9-1/2"	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
9-1/2	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"	-
	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"	-
11-7/8"	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"	-
	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
14"	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
14	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"	-
	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
16"	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"	-

		Mi	d-span blocking	g with 1x4 inch s	trap	Mid-sp	an blocking an	d 1/2 in. gypsum	ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
0.4/0"	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
9-1/2"	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"	-
	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"	-
11-7/8"	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"	-
	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	21'-8"	-
14"	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
14	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"	-
	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
16"	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"	-

- 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.





Maximum Floor Spans - S4.1

Design Criteria

Spans: Simple span

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

			В	are			1/2 in. gy	osum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"
0.4/0"	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	15'-2"
9-1/2"	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"
	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"
11-7/8"	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"
	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"
14"	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10
14	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"
	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"
16"	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"

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	oan blocking an	d 1/2 in. gypsui	m ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
9-1/2"	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
9-1/2	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10'
	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
11-7/8"	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"
	NI-40x	24'-5"	22'-9"	21'-9"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"
14"	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10'
14	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"
	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"
16"	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"

- 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.





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

			В	are			1/2 in. gyp	sum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
9-1/2"	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
9-1/2	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"	-
	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"	-
11-7/8"	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"	-
	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
14"	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
14	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"	-
	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
16"	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"	-

		Mi	d-span blocking	with 1x4 inch s	trap	Mid-sp	oan blocking an	d 1/2 in. gypsum	ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-
9-1/2"	NI-40x	17'-9"	16'-10"	15'-11"	-	18'-2"	16'-11"	15'-11"	-
9-1/2	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"	-
	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"	-
11-7/8"	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"	-
	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	21'-5"	-
14"	NI-60	23'-9"	22'-0"	21'-0"	-	24'-5"	22'-8"	21'-8"	-
14	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"	-
	NI-60	26'-2"	24'-3"	23'-2"	-	26'-11"	25'-0"	23'-11"	-
16"	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"	-

- 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.





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

			В	are			1/2 in. gyp	osum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
0.4/0"	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	15'-1"
9-1/2"	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"
	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'
11-7/8"	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"
	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"
14"	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"
14	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"
	NI-60	23'-7"	21'-10"	20'-10"	19'-9"	24'-4"	22'-7"	21'-7"	20'-5"
16"	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"

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	an blocking an	d 1/2 in. gypsu	ım ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
0.4/0"	NI-40x	18'-7"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
9-1/2"	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'
	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"
11-7/8"	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"
	NI-40x	24'-4"	22'-8"	21'-8"	19'-5"	25'-0"	23'-2"	21'-9"	19'-5"
14"	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10'
14	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"
	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
16"	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"

- 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.





Maximum Floor Spans - M2.1

Design Criteria

Spans: Simple span

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

			В	Bare			1/2 in. gyr	osum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
0.4/0"	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
9-1/2"	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"	-
	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"	-
11-7/8"	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"	-
	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
14"	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
14	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"	-
	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
16"	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"	-

		Mi	d-span blocking	g with 1x4 inch s	trap	Mid-sp	oan blocking an	d 1/2 in. gypsum	ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
9-1/2"	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
9-1/2	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"	-
	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"	-
11-7/8"	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"	-
	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	20'-11"	-
14"	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
14	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"	-
	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
16"	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"	_

- 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.





Maximum Floor Spans - M4.1

Design Criteria

Spans: Simple span

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

			В	are		1/2 in. gypsum ceiling On centre spacing				
Joist depth	Joist series		On cent	re spacing						
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	15'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"	
0.4/0"	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	14'-11'	
9-1/2"	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'-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"	
	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"	
14"	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10'	
14	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"	

		Mi	d-span blocking	with 1x4 inch	strap	Mid-span blocking and 1/2 in. gypsum ceiling				
Joist depth	Joist series	On centre spacing				On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"	
0.4/0!!	NI-40x	18'-8"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11'	
9-1/2"	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'	
	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"	
11-7/8"	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"	
	NI-40x	24'-5"	22'-9"	20'-11"	18'-8"	25'-1"	22'-11"	20'-11"	18'-8"	
14"	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10'	
14	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"	

- 1. The tabulated clear spans are based on CSA 086-14 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.





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

			В	are		1/2 in. gypsum ceiling				
Joist depth	Joist series	On centre spacing				On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-	
9-1/2"	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-	
9-1/2	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"	-	
	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"	-	
11-7/8"	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"	-	
	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-	
14"	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-	
14"	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"	-	
	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-	
16"	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		Mi	d-span blocking	with 1x4 inch st	trap	Mid-span blocking and 1/2 in. gypsum ceiling				
	Joist series	On centre spacing				On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-	
0.4/0"	NI-40x	17'-9"	16'-10"	15'-11"	-	18'-2"	16'-11"	15'-11"	-	
9-1/2"	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"	-	
	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"	-	
11-7/8"	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"	-	
	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	20'-11"	-	
14"	NI-60	23'-9"	22'-0"	21'-0"	-	24'-5"	22'-8"	21'-8"	-	
14	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"	-	
	NI-60	26'-2"	24'-3"	23'-2"	-	26'-11"	25'-0"	23'-11"	-	
16"	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"	_	

- 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.





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

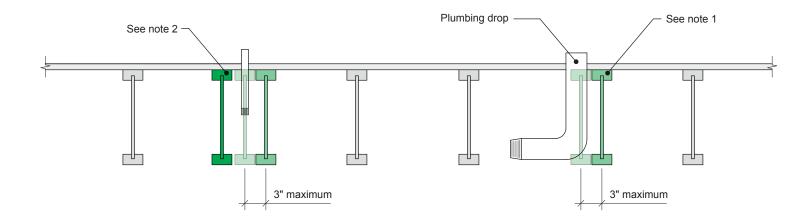
Maximum Floor Spans

			В	are		1/2 in. gypsum ceiling On centre spacing				
Joist depth	Joist series		On cent	re spacing						
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"	
0.4/0"	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	14'-11'	
9-1/2"	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"	
	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'	
11-7/8"	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"	
	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"	
14"	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"	
14	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		Mi	d-span blocking	with 1x4 inch	strap	Mid-span blocking and 1/2 in. gypsum ceiling				
	Joist series	On centre spacing				On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"	
9-1/2"	NI-40x	18'-7"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"	
9-1/2	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'	
	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"	
11-7/8"	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"	
	NI-40x	24'-4"	22'-8"	20'-11"	18'-8"	25'-0"	22'-11"	20'-11"	18'-8"	
4.4"	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10'	
14"	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"	

- 1. The tabulated clear spans are based on CSA 086-14 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.





Notes:

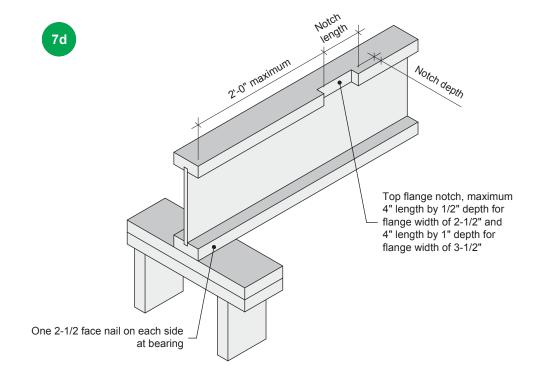
- 1. To prevent interference with plumbing, a joist may be shifted up to 3 inches if the edge of the floor panel is supported and the span rating is not exceeded.
- 2. In all other cases, an additional joist is required.

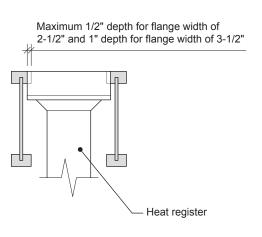
All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for clarity.





TITLE		DRAWING			
Allowance for Piping		7c			
CATEGORY	SCALE	DATE	PAGE		
Openings for Vertical Elements	-	2020-10-01	3.10		





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.





TITLE		DRAWING			
Notch in I-joist for Heat Register		7d			
CATEGORY	SCALE	DATE	PAGE		
Openings for Vertical Elements	-	2020-10-01	3.11		