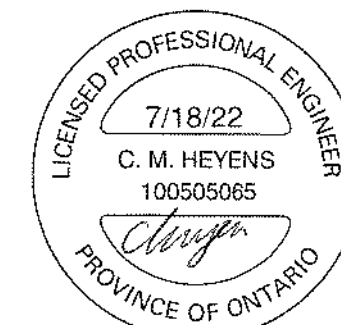


Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	17
J1 DJ	18-00-00	11 7/8" NI-40x	2	4
J2	16-00-00	11 7/8" NI-40x	1	2
J3	14-00-00	11 7/8" NI-40x	1	30
J3 DJ	14-00-00	11 7/8" NI-40x	2	6
J4	12-00-00	11 7/8" NI-40x	1	2
J5	10-00-00	11 7/8" NI-40x	1	11
J5 DJ	10-00-00	11 7/8" NI-40x	2	4
J6	6-00-00	11 7/8" NI-40x	1	4
J7	4-00-00	11 7/8" NI-40x	1	7
J8	2-00-00	11 7/8" NI-40x	1	4
B6	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B3	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B1	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
7	H1	IUS2.56/11.88
3	H1	IUS2.56/11.88
14	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071200 TO TF22071206



STRUCTURAL COMPONENTS ONLY
DWG# TF22071210

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

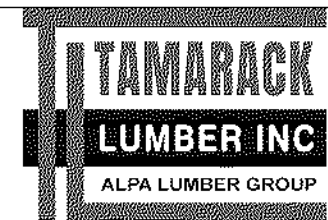
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

STANDARD

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: A

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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:

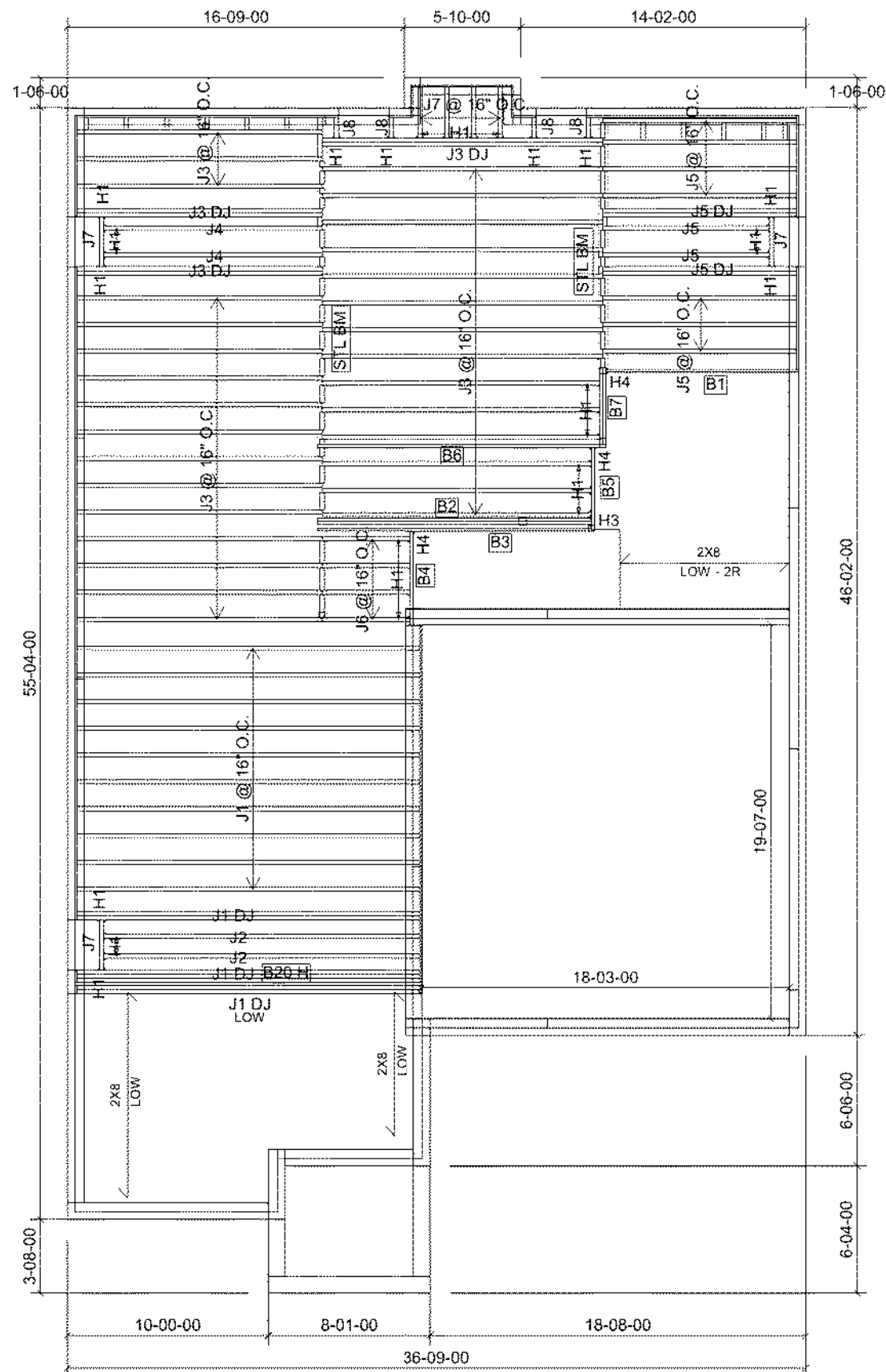
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	10
J1 DJ	18-00-00	11 7/8" NI-40x	2	6
J2	16-00-00	11 7/8" NI-40x	1	2
J3	14-00-00	11 7/8" NI-40x	1	30
J3 DJ	14-00-00	11 7/8" NI-40x	2	6
J4	12-00-00	11 7/8" NI-40x	1	2
J5	10-00-00	11 7/8" NI-40x	1	9
J5 DJ	10-00-00	11 7/8" NI-40x	2	4
J6	6-00-00	11 7/8" NI-40x	1	4
J7	4-00-00	11 7/8" NI-40x	1	7
J8	2-00-00	11 7/8" NI-40x	1	4
B20 H	18-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B3	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B1	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
7	H1	IUS2.56/11.88
3	H1	IUS2.56/11.88
14	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071200 TO TF22071207



STRUCTURAL COMPONENTS ONLY
DWG# TF22071211

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

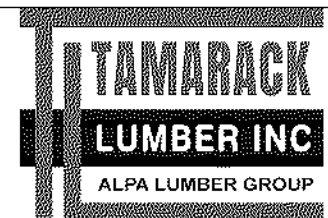
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT SUNKEN

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: A

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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: 3/4" GLUED AND NAILED



1st FLOOR FRAMING

DATE: 2022-07-15

7/18/22
C. M. HEYENS
100505065
Province of Ontario

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

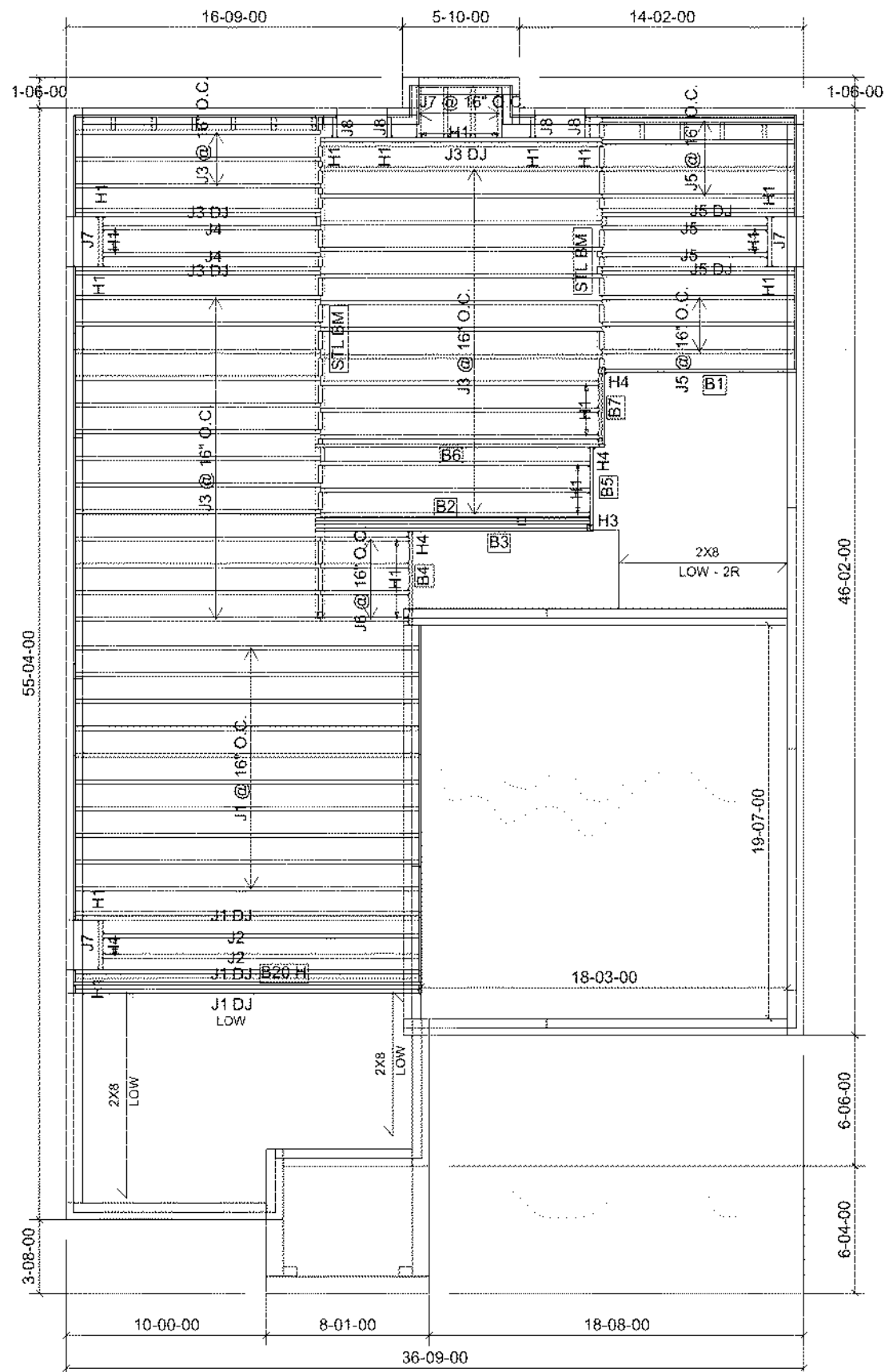
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

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.

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	18-00-00	11 7/8" NI-40x	1	10
J1 DJ	18-00-00	11 7/8" NI-40x	2	6
J2	16-00-00	11 7/8" NI-40x	1	2
J3	14-00-00	11 7/8" NI-40x	1	30
J3 DJ	14-00-00	11 7/8" NI-40x	2	6
J4	12-00-00	11 7/8" NI-40x	1	2
J5	10-00-00	11 7/8" NI-40x	1	9
J5 DJ	10-00-00	11 7/8" NI-40x	2	4
J6	6-00-00	11 7/8" NI-40x	1	4
J7	4-00-00	11 7/8" NI-40x	1	7
J8	2-00-00	11 7/8" NI-40x	1	4
B20 H	18-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B3	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B1	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
7	H1	IUS2.56/11.88
3	H1	IUS2.56/11.88
14	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071200 TO TF22071207



STRUCTURAL COMPONENTS ONLY
DWG# TF22071213

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

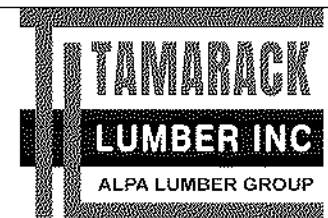
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT SUNKEN

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: B

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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:

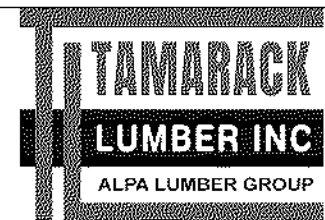
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED



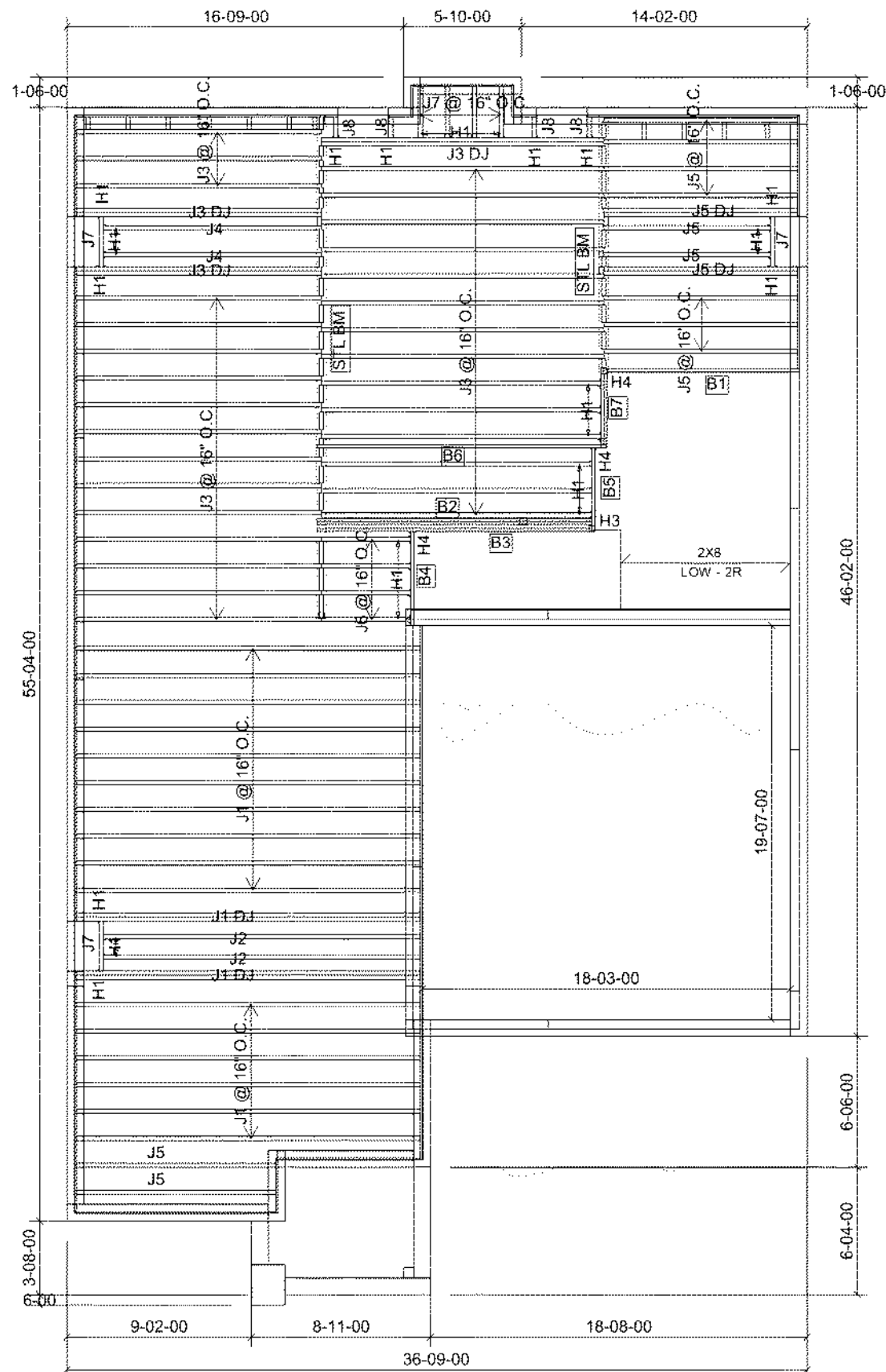
FROM PLAN DATED: 2022/01/12
BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
ELEVATION: C
LOT:
CITY: BRAMPTON
SALESMAN: Rick DiCiano
DESIGNER: PL
REVISION:

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: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	16
J1 DJ	18-00-00	11 7/8" NI-40x	2	4
J2	16-00-00	11 7/8" NI-40x	1	2
J3	14-00-00	11 7/8" NI-40x	1	30
J3 DJ	14-00-00	11 7/8" NI-40x	2	6
J4	12-00-00	11 7/8" NI-40x	1	2
J5	10-00-00	11 7/8" NI-40x	1	11
J5 DJ	10-00-00	11 7/8" NI-40x	2	4
J6	6-00-00	11 7/8" NI-40x	1	4
J7	4-00-00	11 7/8" NI-40x	1	7
J8	2-00-00	11 7/8" NI-40x	1	4
B6	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B3	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B1	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
7	H1	IUS2.56/11.88
3	H1	IUS2.56/11.88
14	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071200 TO TF22071206



STRUCTURAL COMPONENTS ONLY
DWG# TF22071214

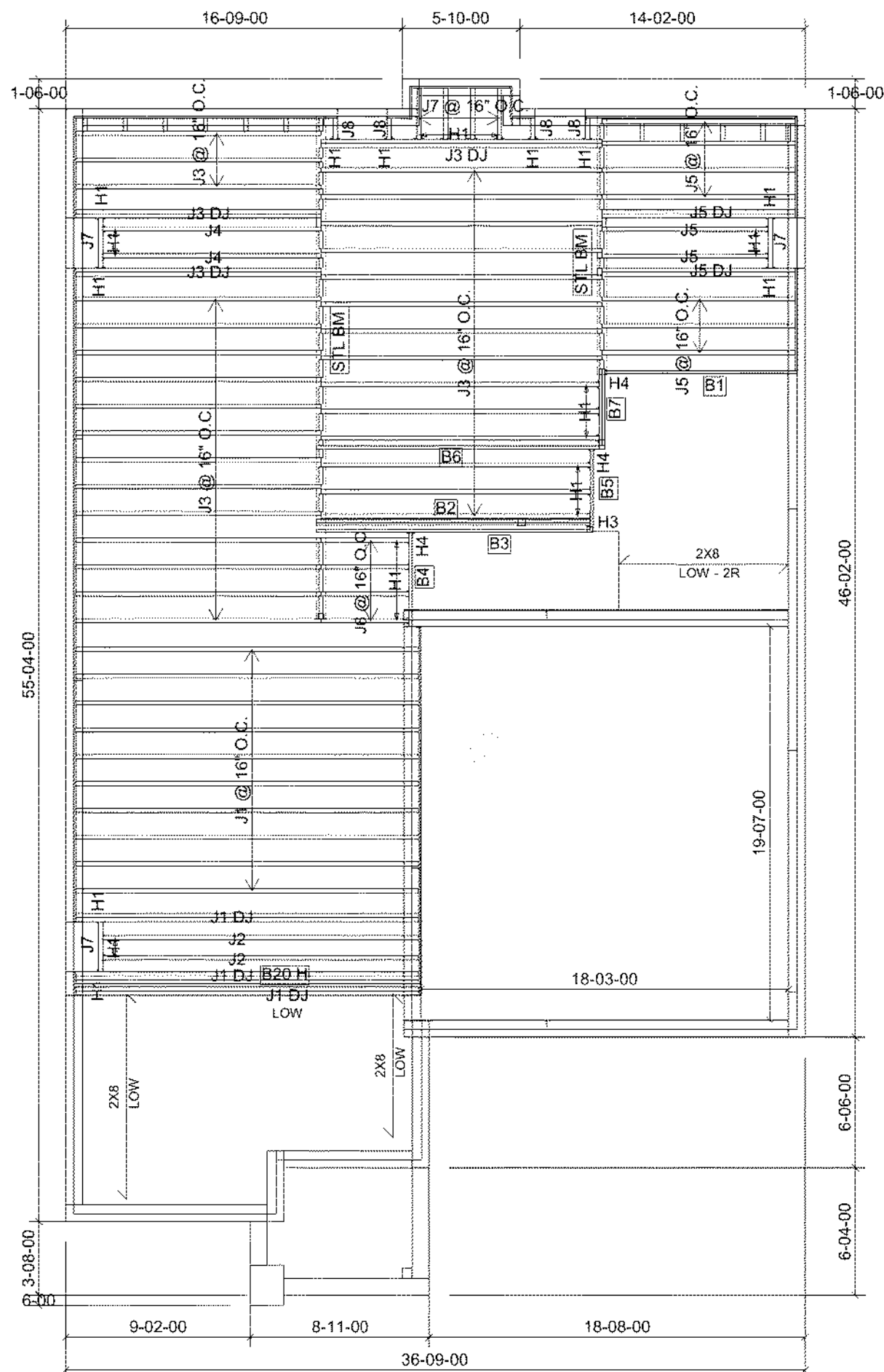
THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

STANDARD

1st FLOOR FRAMING



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	10
J1 DJ	18-00-00	11 7/8" NI-40x	2	6
J2	16-00-00	11 7/8" NI-40x	1	2
J3	14-00-00	11 7/8" NI-40x	1	30
J3 DJ	14-00-00	11 7/8" NI-40x	2	6
J4	12-00-00	11 7/8" NI-40x	1	2
J5	10-00-00	11 7/8" NI-40x	1	9
J5 DJ	10-00-00	11 7/8" NI-40x	2	4
J6	6-00-00	11 7/8" NI-40x	1	4
J7	4-00-00	11 7/8" NI-40x	1	7
J8	2-00-00	11 7/8" NI-40x	1	4
B20 H	18-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B3	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B1	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2

Connector Summary		
Qty	Manuf	Product
7	H1	IUS2.56/11.88
3	H1	IUS2.56/11.88
14	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071200 TO TF22071207



STRUCTURAL COMPONENTS ONLY
DWG# TF22071215

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

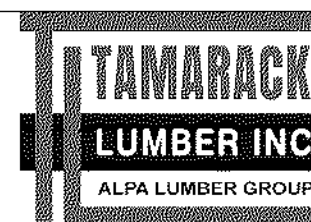
The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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

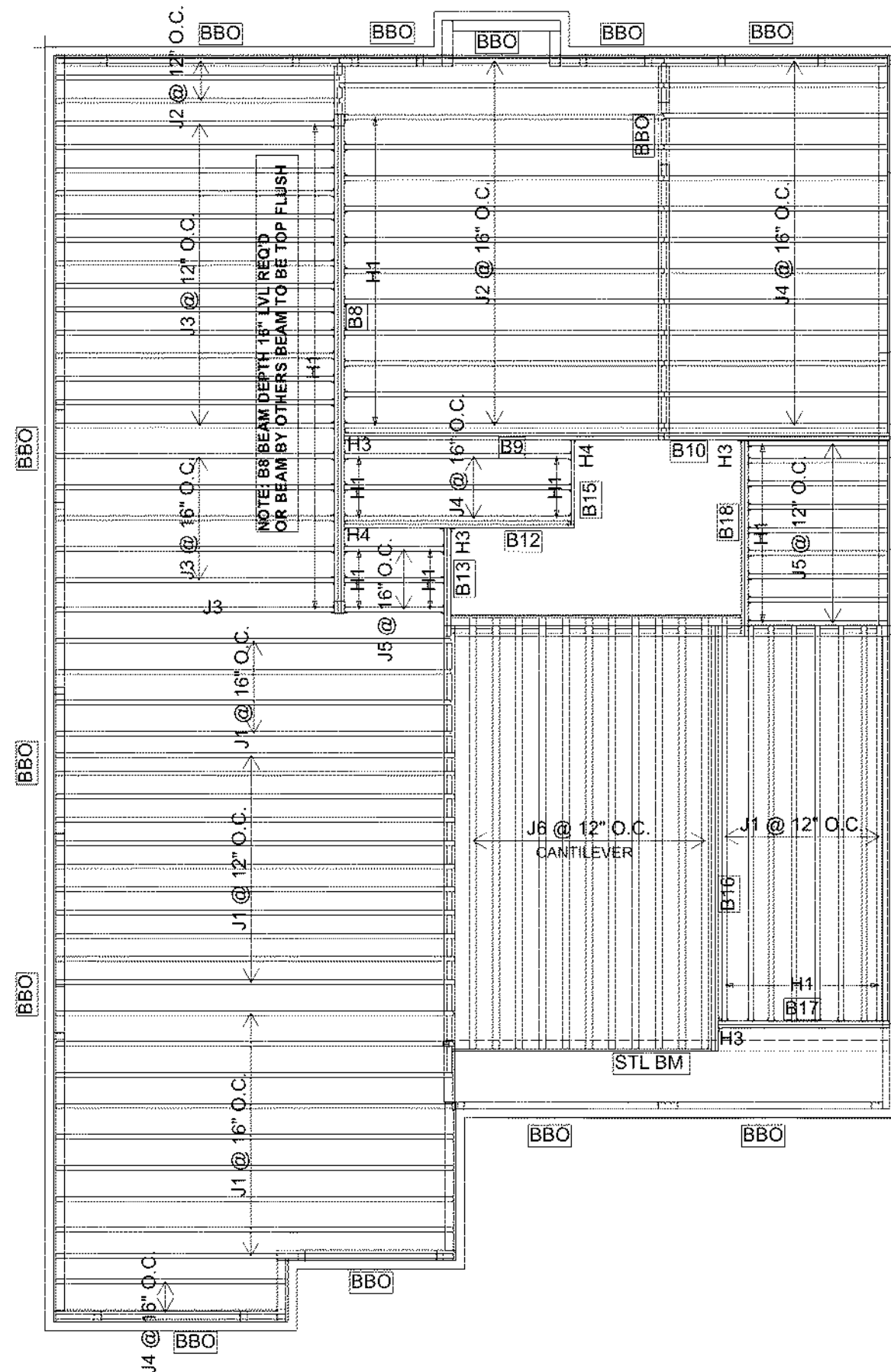
DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED

OPT SUNKEN



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	14-00-00	11 7/8" NI-40x	1	16
J3	12-00-00	11 7/8" NI-40x	1	20
J4	10-00-00	11 7/8" NI-40x	1	18
J5	6-00-00	11 7/8" NI-40x	1	12
J6	20-00-00	11 7/8" NI-80	1	11
B16	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B9	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B18	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B17	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B13	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B15	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	22-00-00	1 3/4" x 16" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
20	H1	IUS2.56/11.88
37	H1	IUS2.56/11.88
1	H3	HGUS410
2	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071199



STRUCTURAL COMPONENTS ONLY
DWG# TF22071216

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

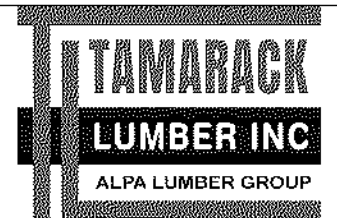
The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: A

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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:

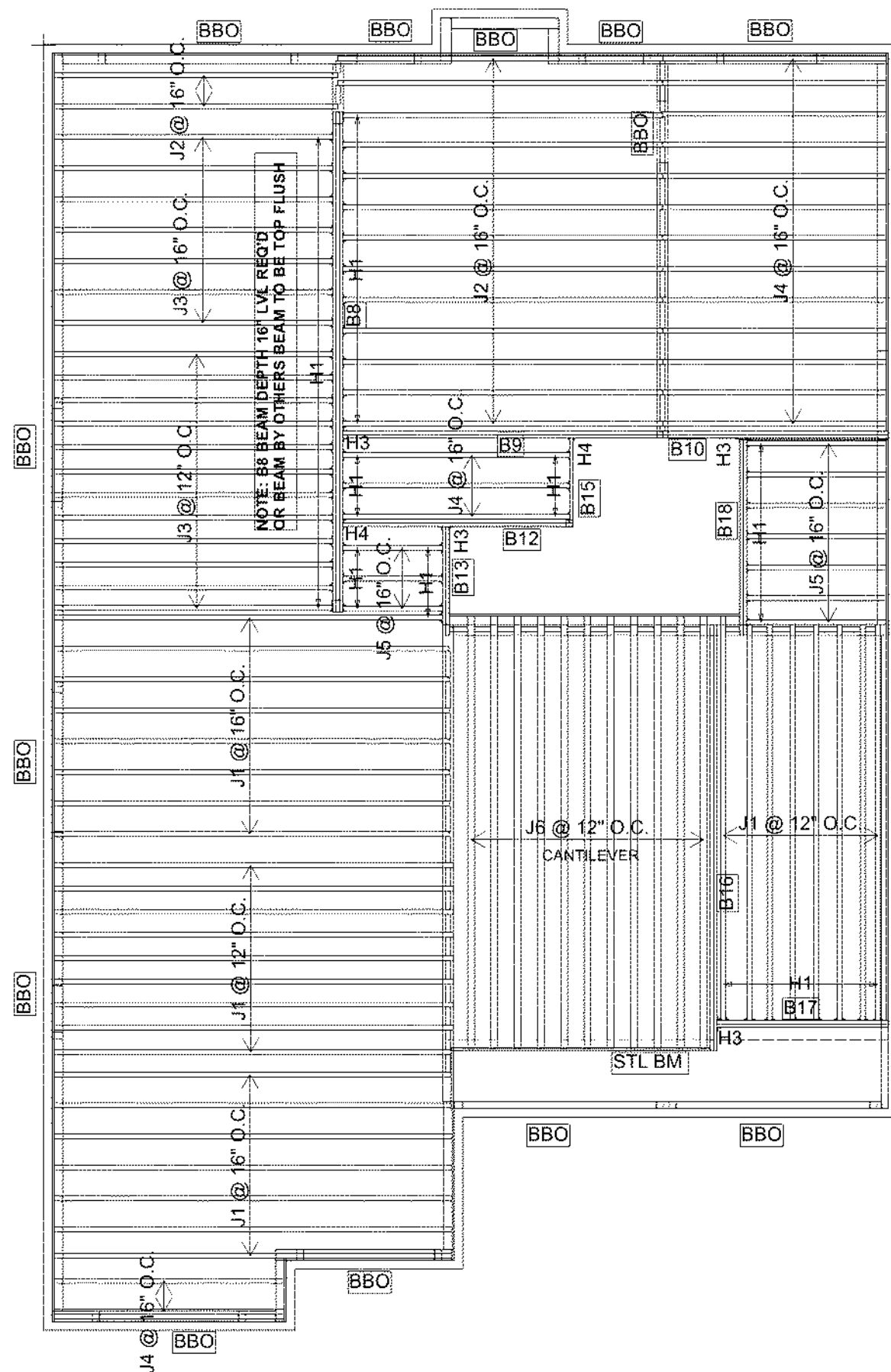
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	14-00-00	11 7/8" NI-40x	1	15
J3	12-00-00	11 7/8" NI-40x	1	19
J4	10-00-00	11 7/8" NI-40x	1	18
J5	6-00-00	11 7/8" NI-40x	1	10
J6	20-00-00	11 7/8" NI-80	1	11
B16	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B9	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B18	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B17	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B13	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B15	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	22-00-00	1 3/4" x 16" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
19	H1	IUS2.56/11.88
36	H1	IUS2.56/11.88
1	H3	HGUS410
2	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071199



STRUCTURAL COMPONENTS ONLY
DWG# TF22071217

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

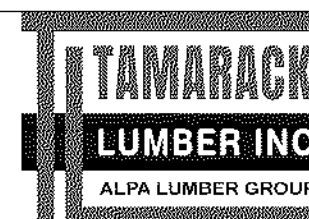
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT 5 BEDROOM

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12
BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
ELEVATION: A
LOT:
CITY: BRAMPTON
SALESMAN: Rick DiCiano
DESIGNER: PL
REVISION:

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.

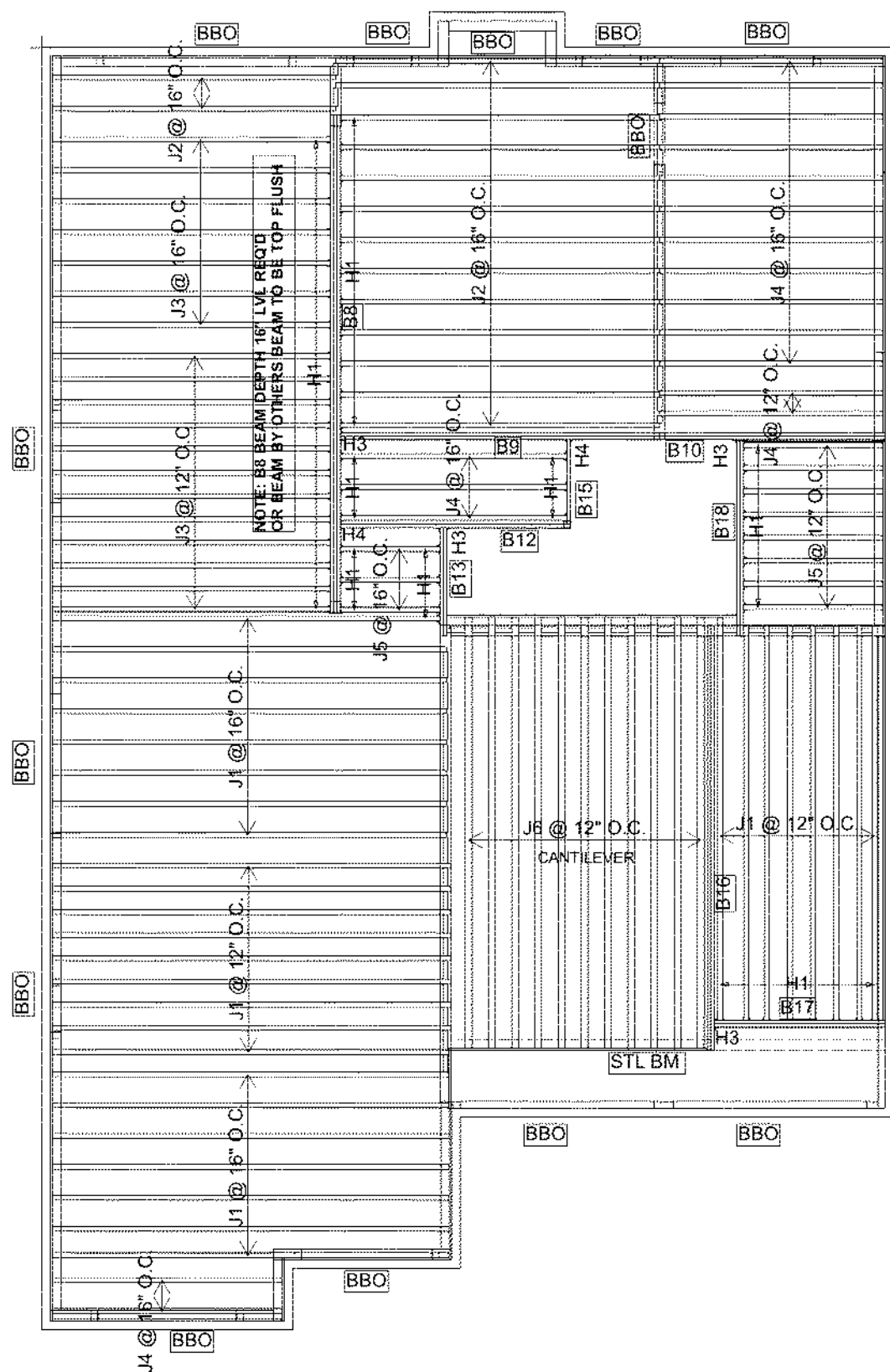
ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE **MANUFACTURER SPECIFIED FASTENERS**.

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



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	14-00-00	11 7/8" NI-40x	1	15
J3	12-00-00	11 7/8" NI-40x	1	19
J4	10-00-00	11 7/8" NI-40x	1	18
J5	6-00-00	11 7/8" NI-40x	1	11
J6	20-00-00	11 7/8" NI-80	1	11
B16	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B9	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B18	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B17	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B13	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B15	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	22-00-00	1 3/4" x 16" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
20	H1	IUS2.56/11.88
36	H1	IUS2.56/11.88
1	H3	HGUS410
2	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071199



STRUCTURAL COMPONENTS ONLY
DWG# TF22071218

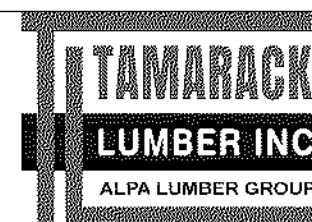
THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT GRD FLOOR 4 BED
& 5 BED

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: A

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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:

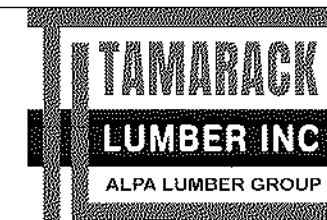
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



FROM PLAN DATED: 2022/01/12
BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
ELEVATION: B
LOT:
CITY: BRAMPTON
SALESMAN: Rick DiCiano
DESIGNER: PL
REVISION:

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

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	31
J2	14-00-00	11 7/8" NI-40x	1	16
J3	12-00-00	11 7/8" NI-40x	1	20
J4	10-00-00	11 7/8" NI-40x	1	18
J5	6-00-00	11 7/8" NI-40x	1	12
J6	20-00-00	11 7/8" NI-80	1	12
B30	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B9	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B18	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B31	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B13	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B15	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	22-00-00	1 3/4" x 16" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
19	H1	IUS2.56/11.88
37	H1	IUS2.56/11.88
1	H3	HGUS410
1	H3	HGUS410
1	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071196
DWG# TF22071199
DWG# TF22071208 TO TF22071209



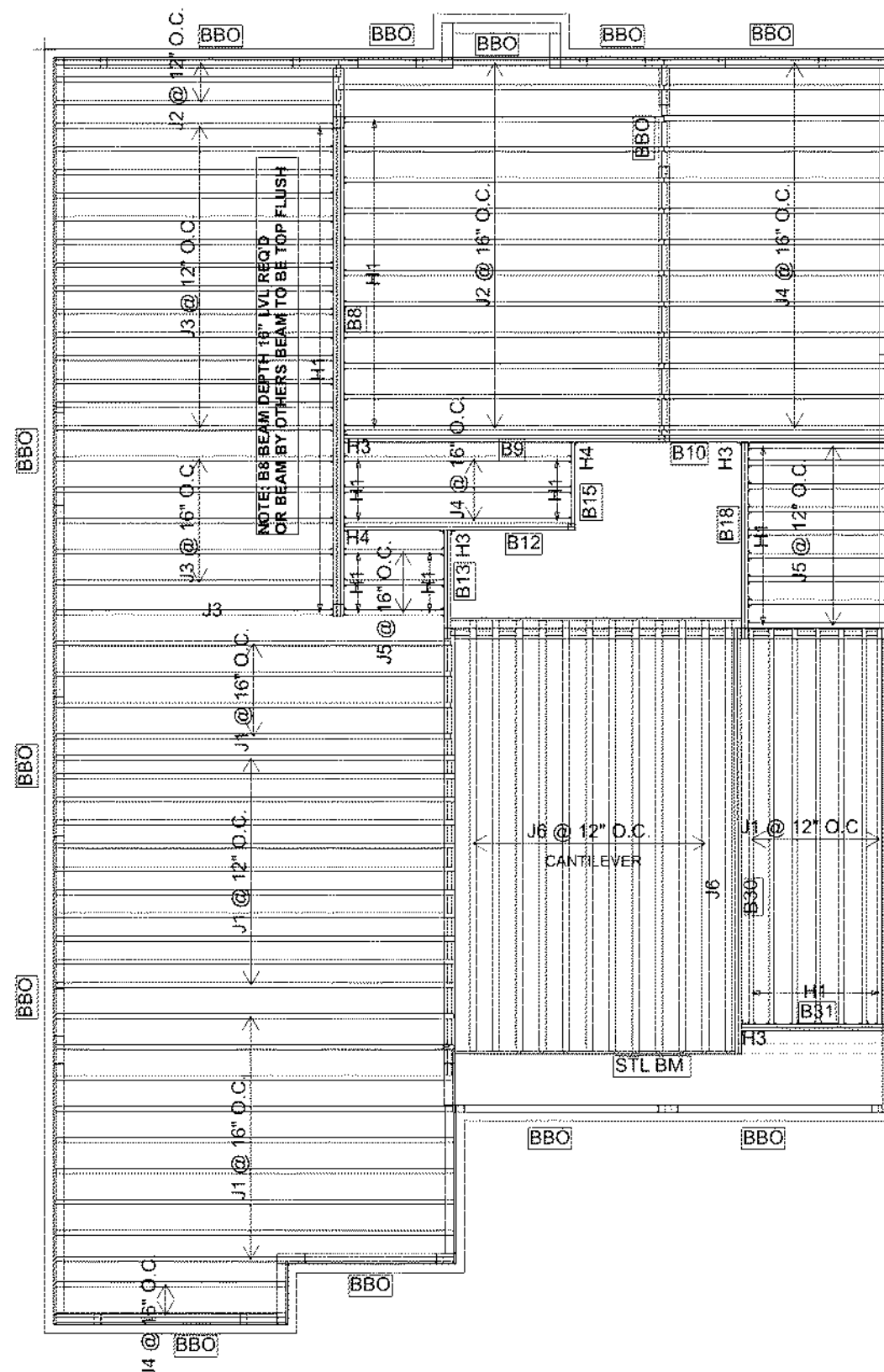
STRUCTURAL COMPONENTS ONLY
DWG# TF22071219

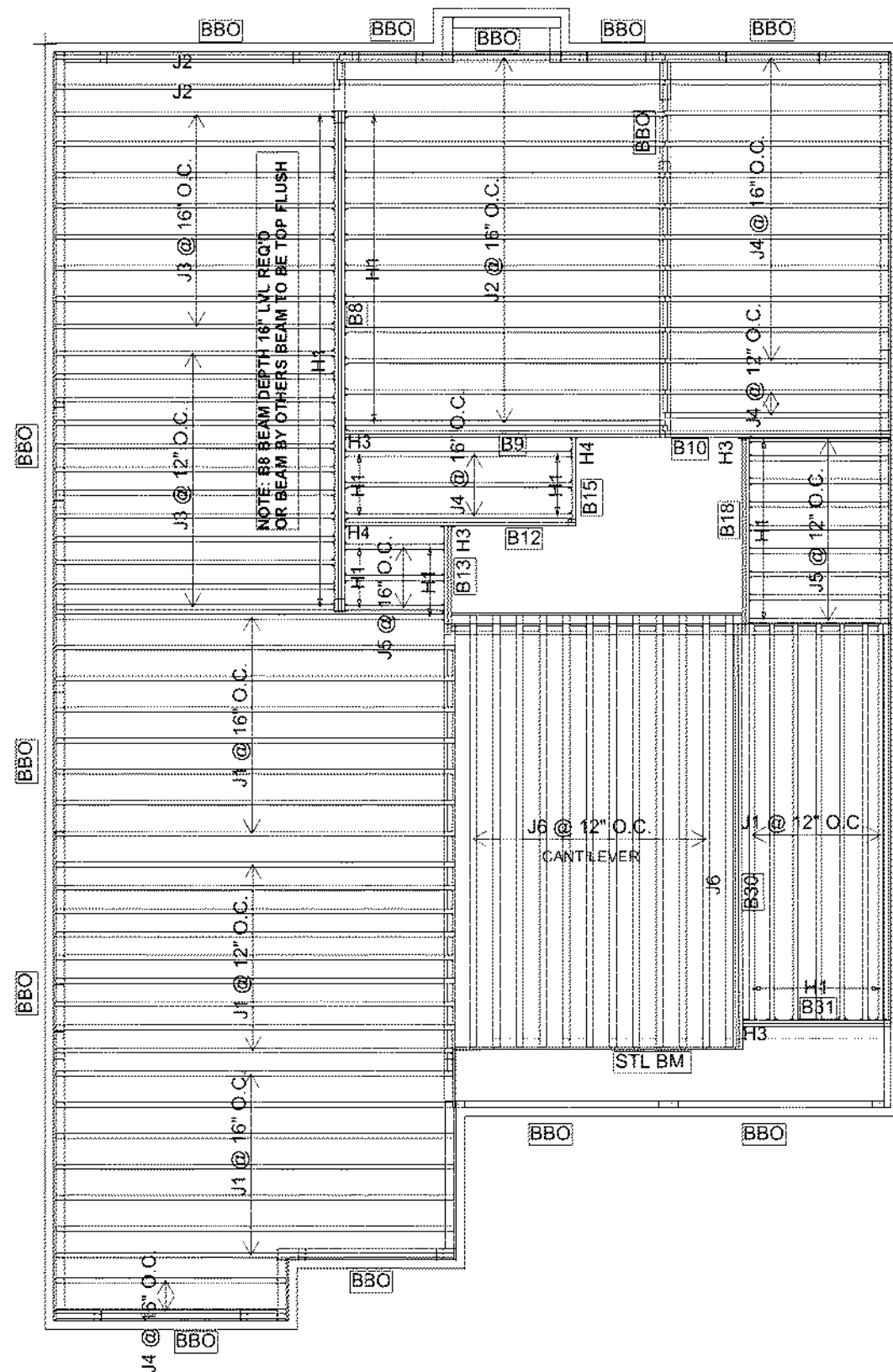
THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

2nd FLOOR FRAMING





Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	31
J2	14-00-00	11 7/8" NI-40x	1	15
J3	12-00-00	11 7/8" NI-40x	1	20
J4	10-00-00	11 7/8" NI-40x	1	18
J5	6-00-00	11 7/8" NI-40x	1	12
J6	20-00-00	11 7/8" NI-80	1	12
B30	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B9	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B18	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B31	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B13	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B15	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	22-00-00	1 3/4" x 16" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
20	H1	IUS2.56/11.88
37	H1	IUS2.56/11.88
1	H3	HGUS410
1	H3	HGUS410
1	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071196
 DWG# TF22071199
 DWG# TF22071208 TO TF22071209



STRUCTURAL COMPONENTS ONLY
 DWG# TF22071220

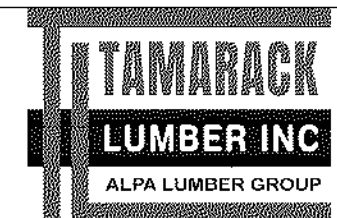
THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
 The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
 The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT 4 & 5 BED

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: B

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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:

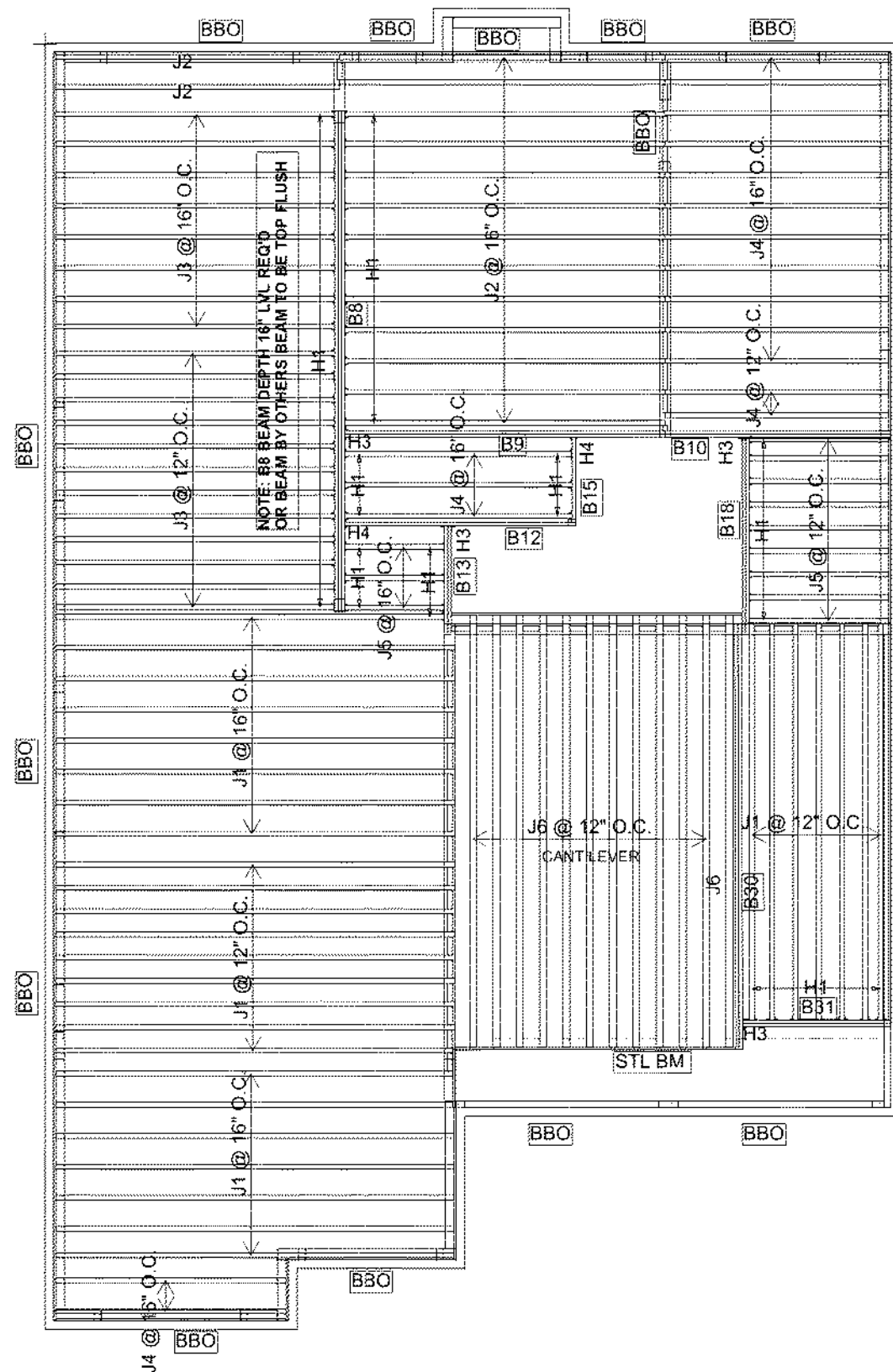
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	31
J2	14-00-00	11 7/8" NI-40x	1	15
J3	12-00-00	11 7/8" NI-40x	1	20
J4	10-00-00	11 7/8" NI-40x	1	18
J5	6-00-00	11 7/8" NI-40x	1	12
J6	20-00-00	11 7/8" NI-80	1	12
B30	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B9	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
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B13	6-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B15	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	22-00-00	1 3/4" x 16" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
20	H1	IUS2.56/11.88
37	H1	IUS2.56/11.88
1	H3	HGUS410
1	H3	HGUS410
1	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071196
 DWG# TF22071199
 DWG# TF22071208 TO TF22071209



STRUCTURAL COMPONENTS ONLY
 DWG# TF22071221

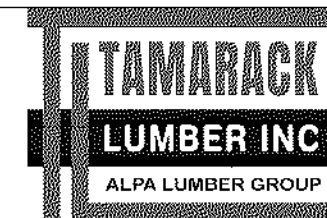
THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

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DATE: 2022-07-15

OPT 4 & 5 BED

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: B

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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
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 MANUFACTURER SPECIFIED FASTENERS.

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 THE **SUPPORTING MEMBER** MUST BE A MINIMUM
 OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED
 BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:

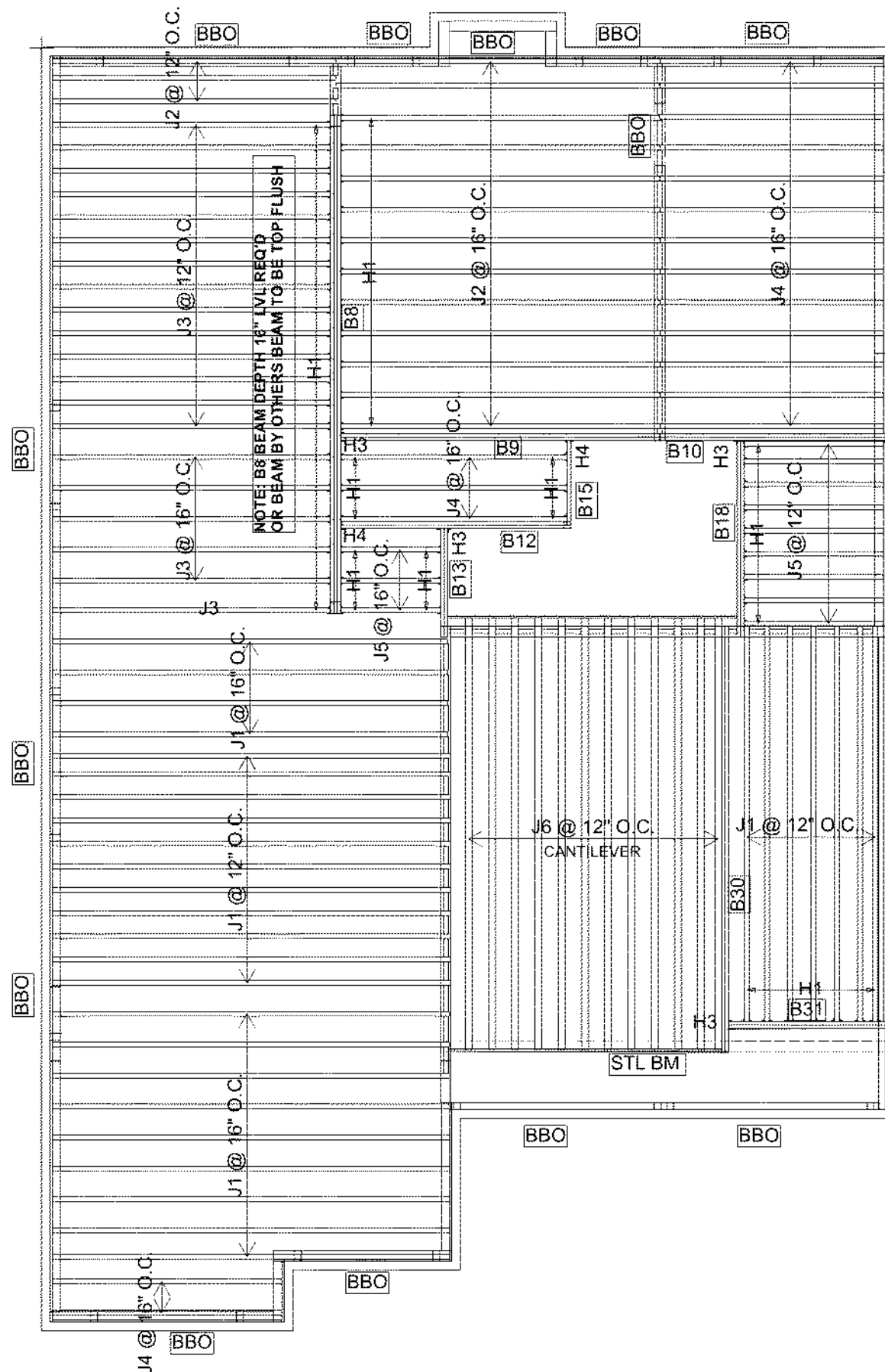
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

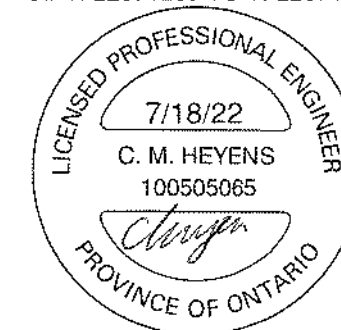
SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	31
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Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/11.88
19	H1	IUS2.56/11.88
37	H1	IUS2.56/11.88
1	H3	HGUS410
2	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071196
DWG# TF22071199
DWG# TF22071208 TO TF22071209



STRUCTURAL COMPONENTS ONLY
DWG# TF22071222

THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

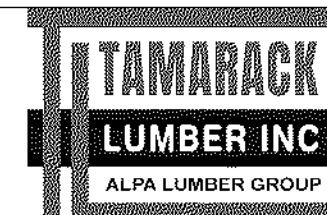
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DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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

SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D
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MULTIPLE SQUASH BLOCKS REQ'D UNDER
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CANTILEVERED JOISTS INCLUDING CANT' OVER
BRICK REQ. 1-JOIST BLOCKING ALONG BEARING
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FOR HOLES INCLUDING DUCT CHASE AND FIELD
CUT OPENINGS SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL CONNECTORS MUST BE INSTALLED AS PER THE
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ALL BEAM HANGER FASTENERS INSTALLED INTO
THE SUPPORTING MEMBER MUST BE A MINIMUM
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LOADING:

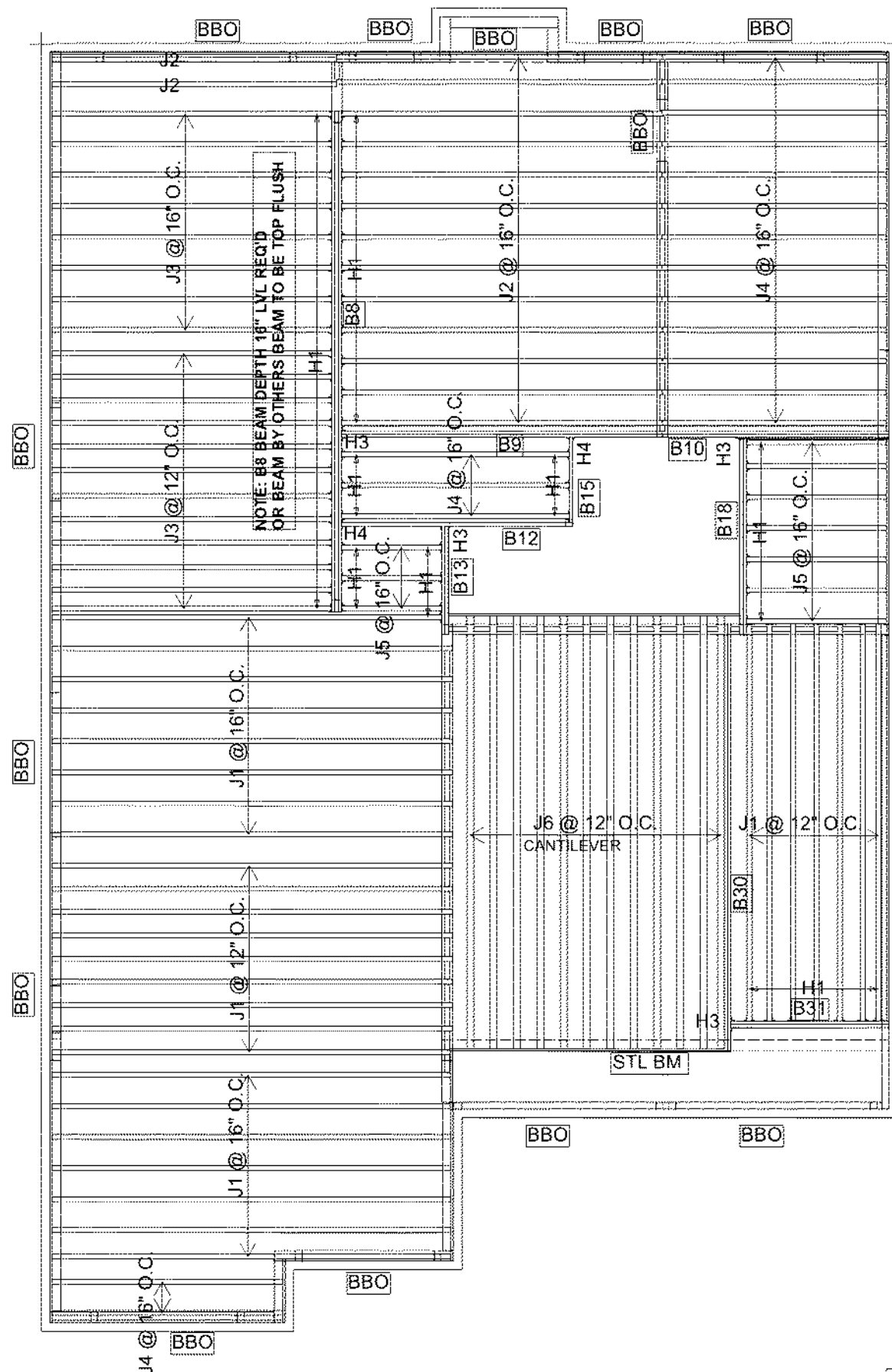
LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

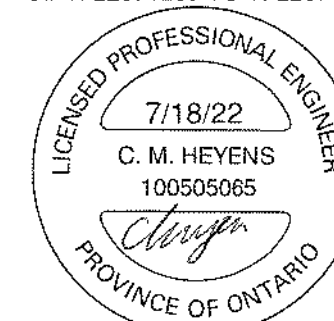
SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
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Qty	Manuf	Product
3	H1	IUS2.56/11.88
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2	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071196
 DWG# TF22071199
 DWG# TF22071208 TO TF22071209



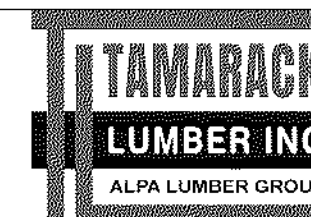
STRUCTURAL COMPONENTS ONLY
 DWG# TF22071223

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DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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.
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 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

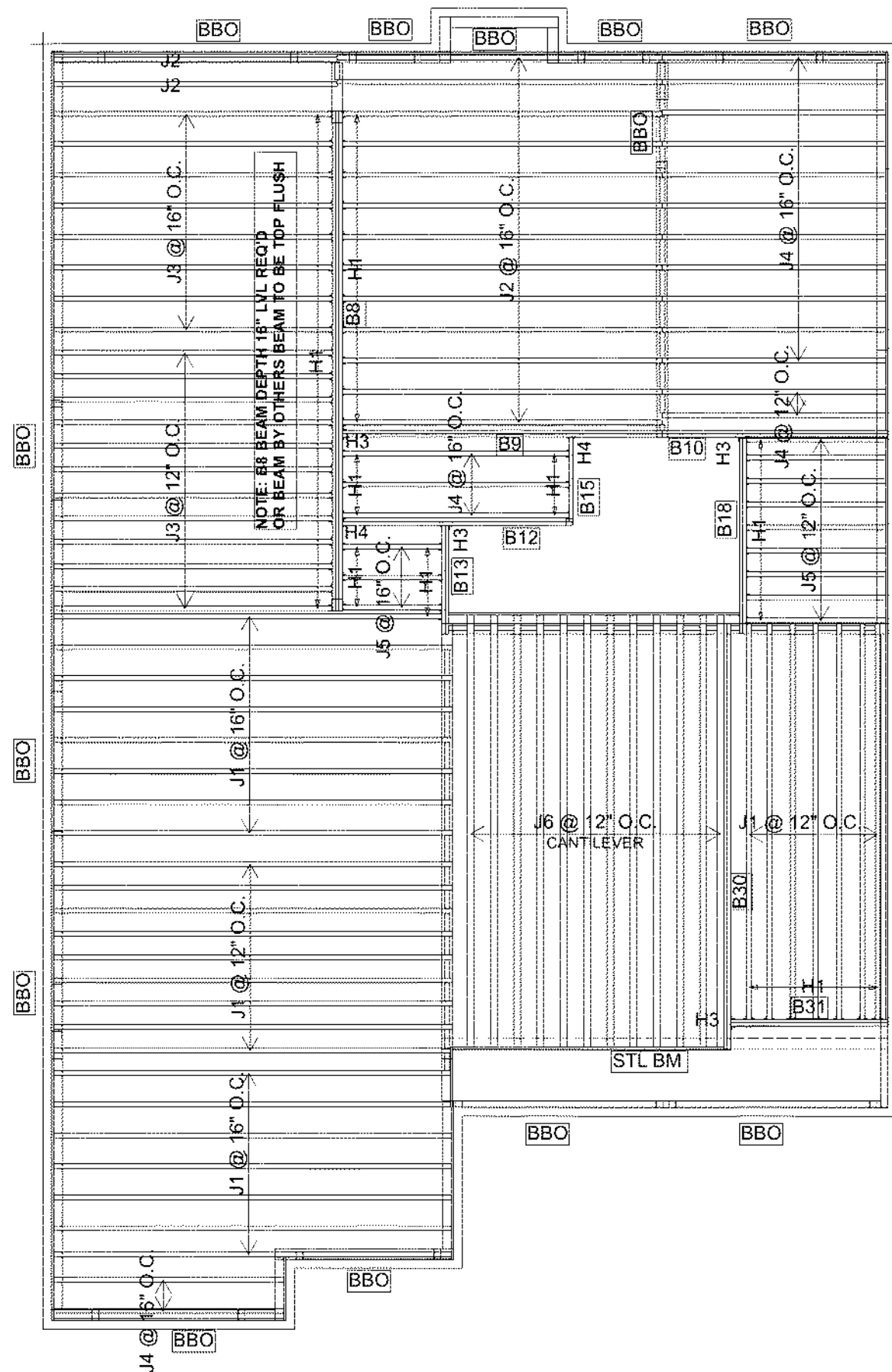
DEAD LOAD: 15.0 lb/ft²

TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

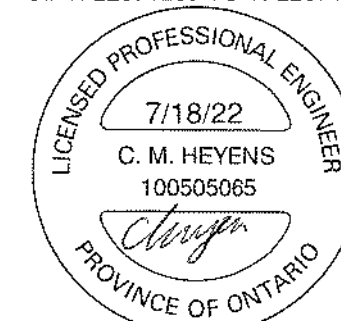
OPT 5 BED



Products				
PlotID	Length	Product	Plies	Net Qty
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J6	20-00-00	11 7/8" NI-80	1	12
B30	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
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B12	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B10	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
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Connector Summary		
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37	H1	IUS2.56/11.88
1	H3	HGUS410
2	H3	HGUS410
1	H3	HGUS410
1	H4	HUS1.81/10
1	H4	HUS1.81/10

DWG# TF22071191 TO TF22071196
 DWG# TF22071199
 DWG# TF22071208 TO TF22071209



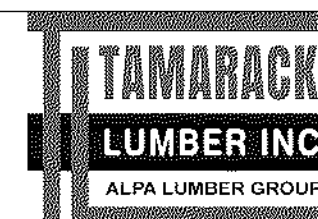
STRUCTURAL COMPONENTS ONLY
 DWG# TF22071224

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DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4501

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

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

SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D
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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

OPT GRD FLOOR 4 BED
 & 5 BED

NORDIC

INSTALLATION GUIDE NORDIC JOIST

NS-G133 
ENGLISH
VERSION
2020-10-01

Engineered Wood Products

BASIC INSTALLATION GUIDE FOR RESIDENTIAL FLOORS



NORDIC
STRUCTURES

nordic.ca

INSTALLING NORDIC I-JOISTS

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

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

SAFETY AND CONSTRUCTION PRECAUTIONS

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

Avoid Accidents by Following these Important Guidelines:

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



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



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

NORDIC I-JOIST SERIES

RESIDENTIAL SERIES

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

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

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

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

NI-90
2x4 2400F MSR
3/8 in. web
Depths
11-7/8, 14 and 16 in.
23 pieces per unit

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

WEB STIFFENERS

2 Concentrated Load (Load Stiffener)

End Bearing (Bearing Stiffener)

Stiffener Size Requirements

Flange width (in.)	Web stiffener size each side of web (in.)
2-1/2	1 x 2-5/16 Minimum width
3-1/2	1-1/2 x 2-5/16 Minimum width

NAIL SPACING

Nailing into flange face

Nailing into flange edge

Nailed to Only One Flange Edge (Top View)

Nailed to Both Flange Edges (Top View)

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

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

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

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

1a Nordic I-joist blocking panel

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

Attach I-joist to top plate per detail 1b

1b Rim board

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

Attach rim board to top plate using 2-1/2" toe-nails at 6" o.c.

One 2-1/2" face nail at each side at bearing

1d Nordic I-joist or rim board blocking panel per detail 1a

Squash block, 1/16" longer than the I-joist depth

Attach squash block to top and bottom flange with one 2-1/2" nail at each location

1e Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above. Stagger nails to avoid splitting.

1g Load-bearing wall above shall align vertically with the wall below. Other conditions, such as offset bearing walls, are not covered by this detail.

Blocking panel required over all interior supports under load-bearing walls or when floor joists are not continuous over support. The NBC requires blocking at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).

Joist attachment per detail 1b

2-1/2" nails at 6" o.c. to top plate

Nordic I-joist blocking panel per detail 1a

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

Double I-joist header

Filler block per detail 1p

Top- or face-mount hanger

Backer block required: - Only on the loaded side for top-mount hangers - On both sides for face-mount hangers

1i Install hanger per manufacturer's recommendations

Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1j Top- or face-mount hanger installed per manufacturer's recommendations

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

Top-mount hanger installed per manufacturer's recommendations

1l-1 Blocking panel

Two 2-1/2" nails from joist web to lumber piece

Two 2-1/2" nails from blocking panel web to lumber piece

1m Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1n Do not bevel-cut I-joist beyond inside face of wall

Attach I-joist per detail 1b

1a Nordic I-joist blocking panel

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

Attach I-joist to top plate per detail 1b

1b Rim board

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

Attach rim board to top plate using 2-1/2" toe-nails at 6" o.c.

One 2-1/2" face nail at each side at bearing

1d Nordic I-joist or rim board blocking panel per detail 1a

Squash block, 1/16" longer than the I-joist depth

Attach squash block to top and bottom flange with one 2-1/2" nail at each location

1e Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above. Stagger nails to avoid splitting.

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Blocking panel required over all interior supports under load-bearing walls or when floor joists are not continuous over support. The NBC requires blocking at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).

Joist attachment per detail 1b

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Nordic I-joist blocking panel per detail 1a

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

Double I-joist header

Filler block per detail 1p

Top- or face-mount hanger

Backer block required: - Only on the loaded side for top-mount hangers - On both sides for face-mount hangers

1i Install hanger per manufacturer's recommendations

Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1j Top- or face-mount hanger installed per manufacturer's recommendations

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

Top-mount hanger installed per manufacturer's recommendations

1l-1 Blocking panel

Two 2-1/2" nails from joist web to lumber piece

Two 2-1/2" nails from blocking panel web to lumber piece

1m Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1n Do not bevel-cut I-joist beyond inside face of wall

Attach I-joist per detail 1b

1a Nordic I-joist blocking panel

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

Attach I-joist to top plate per detail 1b

1b Rim board

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

Attach rim board to top plate using 2-1/2" toe-nails at 6" o.c.

One 2-1/2" face nail at each side at bearing

1d Nordic I-joist or rim board blocking panel per detail 1a

Squash block, 1/16" longer than the I-joist depth

Attach squash block to top and bottom flange with one 2-1/2" nail at each location

1e Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above. Stagger nails to avoid splitting.

1g Load-bearing wall above shall align vertically with the wall below. Other conditions, such as offset bearing walls, are not covered by this detail.

Blocking panel required over all interior supports under load-bearing walls or when floor joists are not continuous over support. The NBC requires blocking at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).

Joist attachment per detail 1b

2-1/2" nails at 6" o.c. to top plate

Nordic I-joist blocking panel per detail 1a

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

Double I-joist header

Filler block per detail 1p

Top- or face-mount hanger

Backer block required: - Only on the loaded side for top-mount hangers - On both sides for face-mount hangers

1i Install hanger per manufacturer's recommendations

Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1j Top- or face-mount hanger installed per manufacturer's recommendations

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

Top-mount hanger installed per manufacturer's recommendations

1l-1 Blocking panel

Two 2-1/2" nails from joist web to lumber piece

Two 2-1/2" nails from blocking panel web to lumber piece

1m Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1n Do not bevel-cut I-joist beyond inside face of wall

Attach I-joist per detail 1b

1a Nordic I-joist blocking panel

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

Attach I-joist to top plate per detail 1b

1b Rim board

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

Attach rim board to top plate using 2-1/2" toe-nails at 6" o.c.

One 2-1/2" face nail at each side at bearing

1d Nordic I-joist or rim board blocking panel per detail 1a

Squash block, 1/16" longer than the I-joist depth

Attach squash block to top and bottom flange with one 2-1/2" nail at each location

1e Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above. Stagger nails to avoid splitting.

1g Load-bearing wall above shall align vertically with the wall below. Other conditions, such as offset bearing walls, are not covered by this detail.

Blocking panel required over all interior supports under load-bearing walls or when floor joists are not continuous over support. The NBC requires blocking at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).

Joist attachment per detail 1b

2-1/2" nails at 6" o.c. to top plate

Nordic I-joist blocking panel per detail 1a

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

Double I-joist header

Filler block per detail 1p

Top- or face-mount hanger

Backer block required: - Only on the loaded side for top-mount hangers - On both sides for face-mount hangers

1i Install hanger per manufacturer's recommendations

Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1j Top- or face-mount hanger installed per manufacturer's recommendations

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

Top-mount hanger installed per manufacturer's recommendations

1l-1 Blocking panel

Two 2-1/2" nails from joist web to lumber piece

Two 2-1/2" nails from blocking panel web to lumber piece

1m Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify header resistance to support concentrated loads.

Backer block per detail 1h

1n Do not bevel-cut I-joist beyond inside face of wall

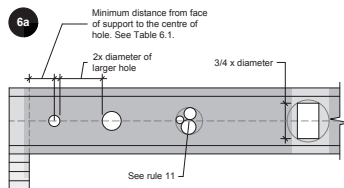
Attach I-joist per detail 1b

WEB HOLES AND OPENINGS

WEB HOLES IN I-JOISTS

Rules for Cutting Holes in I-Joists

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

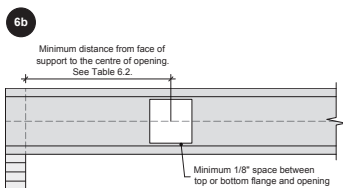


- Notes:**
1. Never drill, cut or notch the flange, or over-cut the web.
 2. Holes in web should be cut with a sharp saw.
 3. For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch-diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

DUCT CHASE OPENINGS

Rules for Cutting Duct Chase Openings in I-joists

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

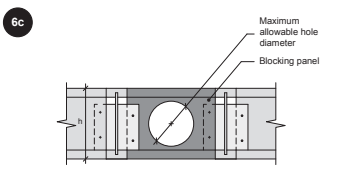


- Notes:**
1. Never drill, cut or notch the flange, or over-cut the web.
 2. Holes in web should be cut with a sharp saw.
 3. Avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch-diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

HOLES IN BLOCKING PANELS

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

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



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

^(a) Maximum allowable hole diameter in blocking panel, where the blocking panel is longer than its height.

TABLE 6.1 - LOCATION OF WEB HOLES

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

- Notes:**
1. Tabulated values are applicable to residential floor construction meeting the above design criteria.
 2. The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

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

TABLE 6.2 - LOCATION OF DUCT CHASE OPENINGS

Simple span		Minimum distance from inside face of any support to centre of opening (ft-in.)
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BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B8 - i10781
Type: Beam

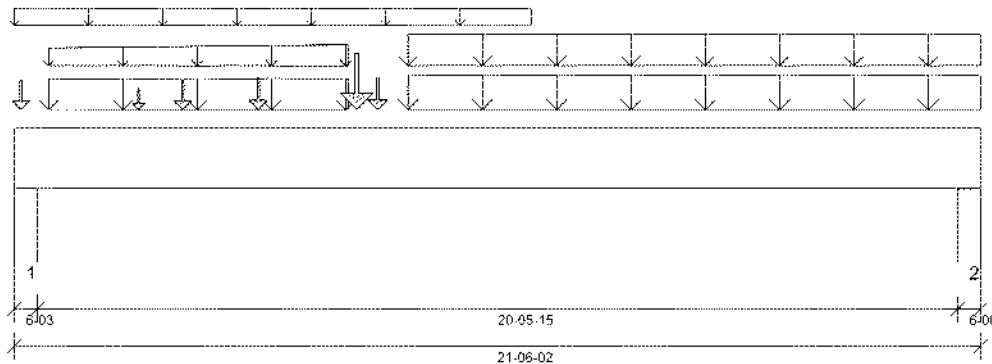
3 Ply Member
1 3/4" x 16" (2.0E 3100)
WestFraser LVL

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 07/15/2022 14:20



DESIGN INFORMATION

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

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 5 3/16"
- 615 psi Wall @ 21'- 1 3/16"

PLY TO PLY CONNECTION:

5 ROWS OF 3.25" PNEUMATIC GUN
NAILS (0.120"x3.25") @ 12" O/C
NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	10'- 9 3/16"	1.25D + 1.5L	1.00	64427 lb ft	93360 lb ft	Passed - 69%
Factored Shear:	19'- 8 3/16"	1.25D + 1.5L	1.00	11654 lb	27922 lb	Passed - 42%
Live Load (LL) Pos. Defl.:	10'- 9 9/16"	L		0.602"	L/360	Passed - L/408
Total Load (TL) Pos. Defl.:	10'- 8 3/4"	D + L		1.011"	L/240	Passed - L/243
Permanent Deflection:	10'- 7 1/2"			-	L/360	Passed - L/619

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	6-03	1.25D + 1.5L	1.00	12063 lb		33838 lb	20016 lb	Passed - 60%
2	6-00	1.25D + 1.5L	1.00	13022 lb		32614 lb	19293 lb	Passed - 67%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	21'- 6 1/8"	Self Weight	Top	24 lb/ft	-	-	-
Uniform	0'	11'- 6 1/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	8'- 9 3/16"	21'- 6 1/8"	Smoothed Load	Front	147 lb/ft	294 lb/ft	-	-
Uniform	8'- 9 3/16"	21'- 6 1/8"	Smoothed Load	Back	123 lb/ft	248 lb/ft	-	-
Tapered	0'- 9 3/16"	7'- 5 3/16"	Smoothed Load	Back	120 To 122 lb/ft	239 To 245 lb/ft	-	-
Tapered	0'- 9 3/16"	7'- 5 3/16"	Smoothed Load	Front	27 To 51 lb/ft	55 To 102 lb/ft	-	-
Point	0'- 1 13/16"	0'- 1 13/16"	J5(i10656)	Front	30 lb	61 lb	-	-
Point	2'- 9 3/16"	2'- 9 3/16"	J5(i10505)	Front	55 lb	110 lb	-	-
Point	3'- 9"	3'- 9"	B12(i10720)	Front	146 lb	207 lb	-	-
Point	5'- 5 3/16"	5'- 5 3/16"	J4(i10466)	Front	136 lb	273 lb	-	-
Point	7'- 7 9/16"	7'- 7 9/16"	B9(i10795)	Front	653 lb	320 lb	-	-
Point	8'- 1 3/16"	8'- 1 3/16"	J2(i10563)	Front	128 lb	255 lb	-	-
Point	0'- 1 13/16"	0'- 1 13/16"	J3(i10607)	Back	118 lb	236 lb	-	-
Point	8'- 1 3/16"	8'- 1 3/16"	J3(i10480)	Back	142 lb	283 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 6 3/16"	1(i980)	3637 lb	5021 lb	-	-
2	21'- 3/16"	21'- 6 1/8"	2(i981)	3492 lb	5761 lb	-	-

DESIGN NOTES

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

PLY TO PLY CONNECTION

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071191



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B9 - i10795
Type: Beam

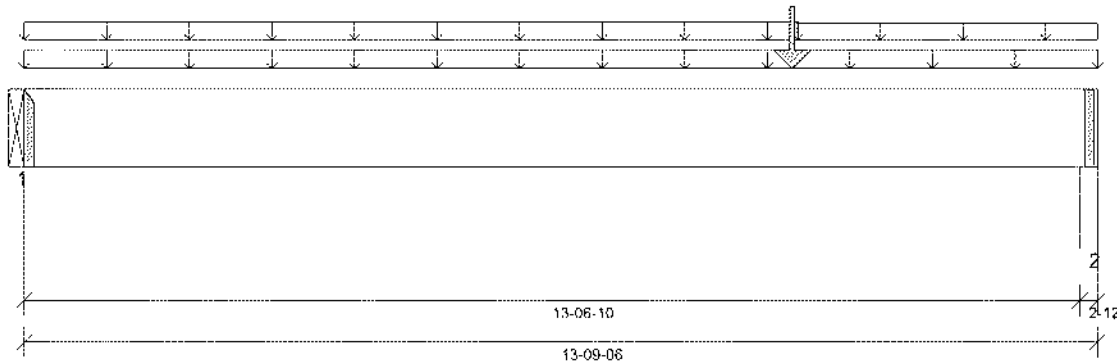
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



DESIGN INFORMATION

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

Lateral Restraint Requirements:

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

Top: 0' Bottom: 9'- 9 7/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Wall @ 13'- 7 5/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 9 5/8"	1.25D + 1.5L	0.88	5674 lb ft	31260 lb ft	Passed - 18%
Factored Shear:	12'- 6 3/4"	1.25D + 1.5L	0.88	1577 lb	12219 lb	Passed - 13%
Live Load (LL) Pos. Defl.:	7'- 3 5/16"	L		0.057"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 1 1/16"	D + L		0.145"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	0.88	1302 lb		4829 lb	-	Passed - 27%
2	2-12	1.25D + 1.5L	0.88	1718 lb		8922 lb	5278 lb	Passed - 33%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 9 3/8"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	13'- 9 3/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'	9'- 11 3/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Uniform	9'- 11 3/16"	13'- 9 3/8"	FC2 Floor Decking (Plan View Fill)	Top	6 lb/ft	12 lb/ft	-	-
Point	9'- 10 5/16"	9'- 10 5/16"	B15(10789)	Front	268 lb	514 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B8(10781)	653 lb	320 lb	-	-
2	13'- 6 5/8"	13'- 9 3/8"	4(983)	764 lb	512 lb	-	-

DESIGN NOTES

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

PLY TO PLY CONNECTION

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071192



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B10 - i10820
Type: Beam

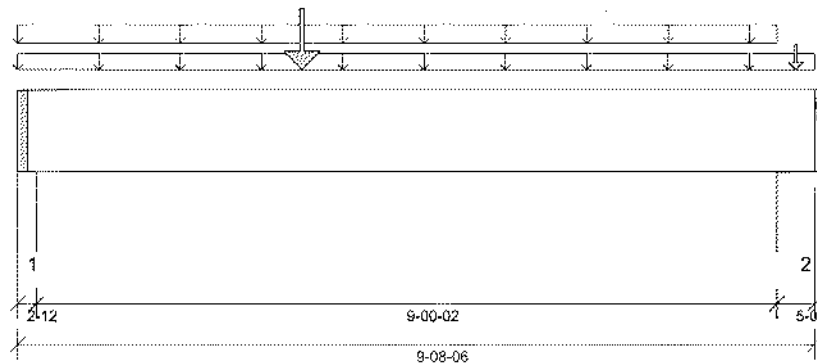
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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'- 7 9/16"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 1 3/4"
- 615 psi Wall @ 9'- 3 7/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 5 9/16"	1.25D + 1.5L	0.83	4147 lb ft	29270 lb ft	Passed - 14%
Factored Shear:	1'- 2 5/8"	1.25D + 1.5L	0.83	1318 lb	11441 lb	Passed - 12%
Live Load (LL) Pos. Defl.:	4'- 5 1/8"	L		0.015"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 6"	D + L		0.043"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	2'-12	1.25D + 1.5L	0.83	1460 lb		8225 lb	4865 lb	Passed - 30%
2	5'-08	1.25D + 1.5S + L	0.75	1266 lb		15095 lb	8929 lb	Passed - 14%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	9'- 8 3/8"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	-0'	9'- 8 3/8"	FC2 Floor Decking (Plan View Fill)	Top	6 lb/ft	12 lb/ft	-	-
Uniform	0'	9'- 2 7/8"	User Load	Top	60 lb/ft	-	-	-
Point	3'- 5 9/16"	3'- 5 9/16"	B18(i10814)	Front	541 lb	502 lb	-	-
Point	9'- 5 5/8"	9'- 5 5/8"	E45(i2074)	Top	102 lb	-	131 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 3/4"	4(i983)	713 lb	379 lb	-	-
2	9'- 2 7/8"	9'- 8 3/8"	E40(i1033)	659 lb	243 lb	131 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.
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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

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071193



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B12 - i10720
Type: Beam

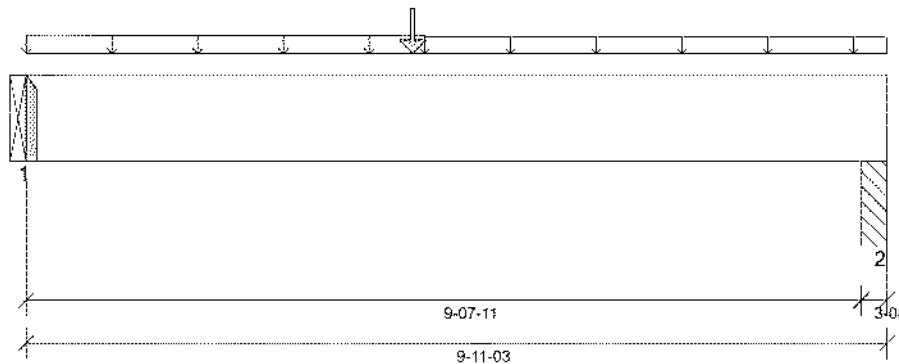
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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'- 2 3/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Column @ 9'- 8 11/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 5 9/16"	1.25D + 1.5L	1.00	1535 lb ft	17672 lb ft	Passed - 9%
Factored Shear:	0'- 11 7/8"	1.25D + 1.5L	1.00	423 lb	6908 lb	Passed - 6%
Live Load (LL) Pos. Defl.:	4'- 8 1/2"	L		0.020"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 8 5/8"	D + L		0.034"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	499 lb		2730 lb	-	Passed - 18%
2	3-08	1.25D + 1.5L	1.00	364 lb		6370 lb	3767 lb	Passed - 10%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	9'- 11 3/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	4'- 7 3/16"	FC2 Floor Decking (Plan View File)	Top	13 lb/ft	27 lb/ft	-	-
Uniform	4'- 7 3/16"	9'- 11 3/16"	FC2 Floor Decking (Plan View File)	Top	4 lb/ft	8 lb/ft	-	-
Point	4'- 5 9/16"	4'- 5 9/16"	B13(i10744)	Front	117 lb	183 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B8(i10781)	146 lb	207 lb	-	-
2	9'- 7 11/16"	9'- 11 3/16"	PBO5(i1037)	117 lb	149 lb	-	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071194



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B13 - i10744
Type: Beam

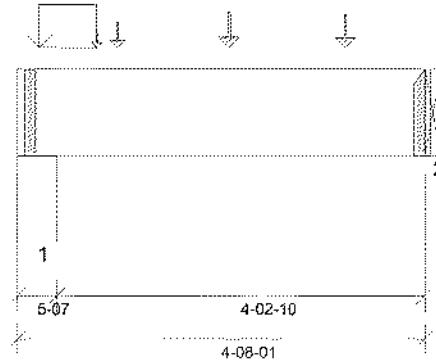
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



DESIGN INFORMATION

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

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240.

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

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

PLY TO PLY CONNECTION:
4 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 # TF22071195

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 5 1/8"	1.25D + 1.5L	1.00	541 lb ft	35345 lb ft	Passed - 2%
Factored Shear:	1'- 5 5/16"	1.25D + 1.5L	1.00	160 lb	13815 lb	Passed - 1%

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'-0"	1.25D + 1.5L	1.00	811 lb		19815 lb	11721 lb	Passed - 7%
2	1'-0"	1.25D + 1.5L	1.00	401 lb		5460 lb	-	Passed - 7%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 8 1/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'- 3"	0'- 10 7/8"	FC2 Floor Decking (Plan View Fill)	Top	173 lb/ft	345 lb/ft	-	-
Point	1'- 1 3/4"	1'- 1 3/4"	J5(i10656)	Back	31 lb	63 lb	-	-
Point	2'- 5 1/8"	2'- 5 1/8"	J5(i10670)	Back	64 lb	128 lb	-	-
Point	3'- 9 1/8"	3'- 9 1/8"	J5(i10505)	Back	67 lb	113 lb	-	-
Point	0'- 10 7/8"	0'- 10 7/8"	FC2 Floor Decking (Plan View Fill)	Top	3 lb	6 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 7/16"	6(i984)	207 lb	354 lb	-	-
2	4'- 8 1/16"	4'- 8 1/16"	B12(i10720)	117 lb	183 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.
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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

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



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B15 - i10789
Type: Beam

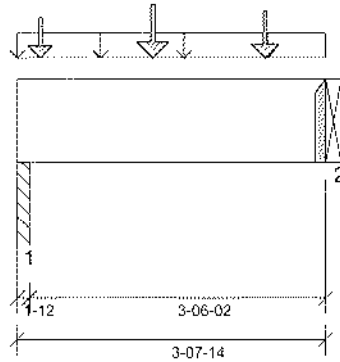
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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'- 3/4"
- 615 psi Beam @ 3'- 7 7/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 7 5/16"	1.25D + 1.5L	1.00	1109 lb ft	17672 lb ft	Passed - 6%
Factored Shear:	1'- 1 5/8"	1.25D + 1.5L	1.00	587 lb	6908 lb	Passed - 9%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	1258 lb		3185 lb	1883 lb	Passed - 67%
2	1-08	1.25D + 1.5L	1.00	1116 lb		2730 lb	-	Passed - 41%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	HUS1.81/10		-	-	-	Connector manually specified by the user.
* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.						

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 7 7/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	3'- 7 7/8"	User Load	Front	60 lb/ft	120 lb/ft	-	-
Point	0'- 3' 5/16"	0'- 3' 5/16"	J4(i10533)	Back	88 lb	175 lb	-	-
Point	1'- 7' 5/16"	1'- 7' 5/16"	J4(i10466)	Back	134 lb	269 lb	-	-
Point	2'- 11' 5/16"	2'- 11' 5/16"	J4(i10495)	Back	111 lb	221 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 1 3/4"	PBO5(i1037)	306 lb	590 lb	-	-
2	3'- 7 7/8"	3'- 7 7/8"	B9(i10795)	268 lb	514 lb	-	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071196



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B16 - i10846
Type: Beam

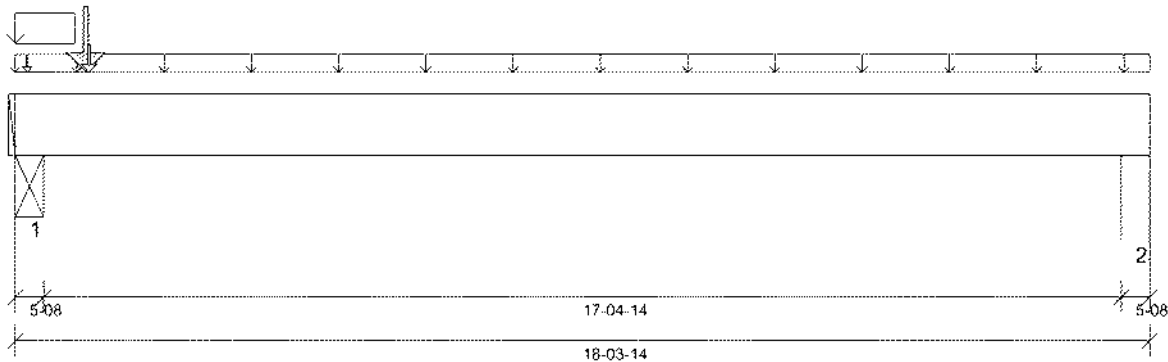
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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'- 6 15/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Wall @ 17'- 11 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 10 3/4"	1.25D + 1.5L + S	1.00	4274 lb ft	35231 lb ft	Passed - 12%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.93	4003 lb	12868 lb	Passed - 31%
Live Load (LL) Pos. Defl.:	8'- 5 1/4"	L + 0.5S		0.085"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 5 3/4"	D + L + 0.5S		0.175"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08"	1.25D + 1.5L + S	1.00	5398 lb		19956 lb	11801 lb	Passed - 46%
2	5'-08"	1.25D + 1.5L	0.93	631 lb		18647 lb	11030 lb	Passed - 6%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	18'- 3 7/8"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	0'- 11 15/16"	FC2 Floor Decking (Plan View Fil)	Top	6 lb/ft	11 lb/ft	-	-
Uniform	0'	0'- 11 9/16"	E47(i2076)	Top	148 lb/ft	-	101 lb/ft	-
Uniform	0'- 11 15/16"	18'- 3 7/8"	FC2 Floor Decking (Plan View Fil)	Top	8 lb/ft	17 lb/ft	-	-
Point	1'- 1 11/16"	1'- 1 11/16"	B17(i10835)	Front	1326 lb	1250 lb	532 lb	-
Point	0'- 2 5/16"	0'- 2 5/16"	E47(i2076)	Top	11 lb	-	23 lb	-
Point	1'- 2 5/16"	1'- 2 5/16"	E63(i2398)	Top	274 lb	-	433 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i1040)	1884 lb	1353 lb	1055 lb	-
2	17'- 10 3/8"	18'- 3 7/8"	5(i985)	242 lb	197 lb	34 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 1. Required Load Area: L=3.500", W=3.500". LDF=1.00, Pf=4078 lb, Qr=10920 lb, Result=37.34%.

PLY TO PLY CONNECTION

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071197



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B17 - i10835
Type: Beam

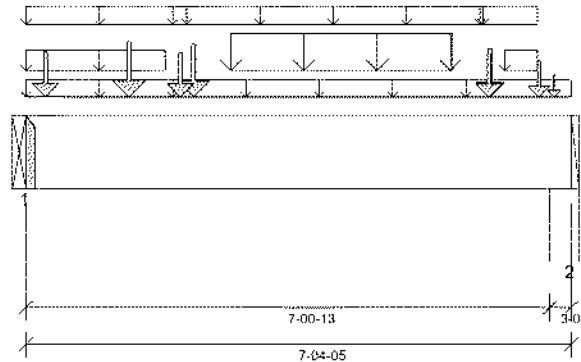
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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 1/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Wall @ 7'- 1 13/16"

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

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 3 1/8"	1.25D + 1.5L + S	1.00	6932 lb ft	35345 lb ft	Passed - 20%
Factored Shear:	6'- 15/16"	1.25D + 1.5L + S	1.00	3903 lb	13815 lb	Passed - 28%
Live Load (LL) Pos. Defl.:	3'- 6 3/4"	L + 0.5S		0.025"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 6 11/16"	D + L + 0.5S		0.047"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L + S	1.00	4014 lb		5460 lb	-	Passed - 74%
2	3-08	1.25D + 1.5L + S	1.00	4129 lb		12740 lb	7536 lb	Passed - 55%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	7'- 4 5/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	7'- 4 5/16"	User Load	Front	28 lb/ft	-	48 lb/ft	-
Uniform	-0'	2'- 2"	E63(i2398)	Top	100 lb/ft	-	-	-
Uniform	-0'	1'- 10 1/2"	E63(i2398)	Top	48 lb/ft	-	101 lb/ft	-
Uniform	2'- 2"	6'- 2"	E64(i2399)	Top	100 lb/ft	-	-	-
Uniform	2'- 9 1/8"	5'- 9 1/8"	Smoothed Load	Back	174 lb/ft	348 lb/ft	-	-
Uniform	6'- 2"	6'- 10 7/8"	E46(i2075)	Top	100 lb/ft	-	-	-
Uniform	6'- 5 1/2"	6'- 10 7/8"	E46(i2075)	Top	48 lb/ft	-	101 lb/ft	-
Point	0'- 3 1/8"	0'- 3 1/8"	J1(i10851)	Back	134 lb	268 lb	-	-
Point	1'- 4 11/16"	1'- 4 11/16"	J1(i10850)	Back	174 lb	348 lb	-	-
Point	2'- 3 1/8"	2'- 3 1/8"	J1(i10852)	Back	163 lb	326 lb	-	-
Point	6'- 3 1/8"	6'- 3 1/8"	J1(i10661)	Back	145 lb	289 lb	-	-
Point	6'- 11 1/16"	6'- 11 1/16"	J1(i10530)	Back	95 lb	191 lb	-	-
Point	2'- 1"	2'- 1"	E63(i2398)	Top	145 lb	-	233 lb	-
Point	6'- 3"	6'- 3"	E46(i2075)	Top	144 lb	-	230 lb	-
Point	7'- 1 9/16"	7'- 1 9/16"	E79(i3211)	Top	49 lb	10 lb	44 lb	-

UNFACTORED REACTIONS


ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B16(i10846)	1326 lb	1250 lb	532 lb	-
2	7'- 13/16"	7'- 4 5/16"	E42(i1035)	1341 lb	1226 lb	563 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071198 PG 1/2

	BUILDER: ROYAL PINE HOMES SITE: FORESTSIDE ESTATES MODEL: 4501 CITY: BRAMPTON	Job Name: 4501 ELEV A STD Level: 2ND FLOOR Label: B17 - i10835 Type: Beam	2 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	Status: Design Passed
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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

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





BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 2ND FLOOR
Label: B18 - i10814
Type: Beam

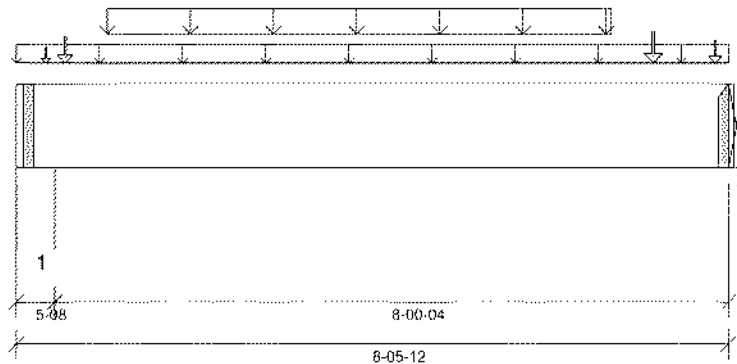
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



DESIGN INFORMATION

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

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Beam @ 8'- 5 3/4"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 7"	1.25D + 1.5L	0.98	2933 lb ft	34585 lb ft	Passed - 8%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.98	1165 lb	13518 lb	Passed - 9%
Live Load (LL) Pos. Defl.:	4'- 5 1/8"	L		0.013"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 5 1/8"	D + L		0.026"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored UpLift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	0.98	1467 lb		19590 lb	11588 lb	Passed - 13%
2	1-08	1.25D + 1.5L	0.98	1432 lb		5343 lb	-	Passed - 27%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	8'- 5 3/4"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	8'- 5 3/4"	User Load	Top	60 lb/ft	-	-	-
Uniform	1'- 1"	7'- 1"	Smoothed Load	Front	63 lb/ft	126 lb/ft	-	-
Point	0'- 7"	0'- 7"	J5(I9596)	Front	39 lb	79 lb	-	-
Point	7'- 7"	7'- 7"	J5(I9729)	Front	58 lb	116 lb	-	-
Point	8'- 3 7/8"	8'- 3 7/8"	J5(I9580)	Front	26 lb	53 lb	-	-
Point	0'- 4 1/4"	0'- 4 1/4"	FC2 Floor Decking (Plan View File)	Top	1 lb	2 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	5(I985)	570 lb	504 lb	-	-
2	8'- 5 3/4"	8'- 5 3/4"	B10(I10820)	541 lb	502 lb	-	-

DESIGN NOTES

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

PLY TO PLY CONNECTION

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071199



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B1 - i10811
Type: Beam

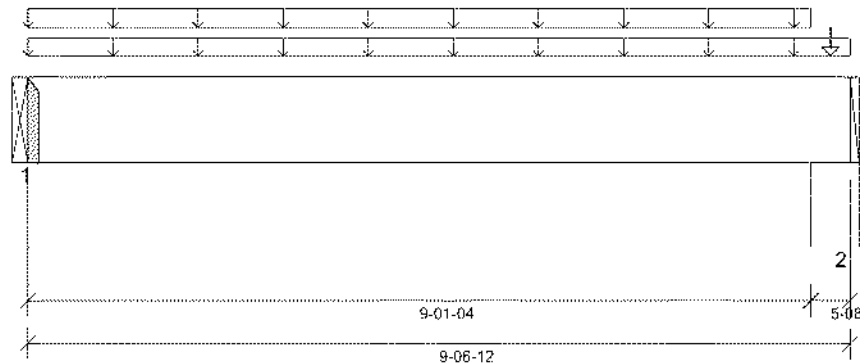
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



DESIGN INFORMATION

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

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240.

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 6 15/16"	1.25D + 1.5L	0.71	1327 lb ft	12480 lb ft	Passed - 11%
Factored Neg. Moment:	9'- 2 1/4"	1.25D + 1.5S + L	0.67	29 lb ft	4976 lb ft	Passed - 1%
Factored Shear:	0'- 11 7/8"	1.25D + 1.5L	0.71	454 lb	4878 lb	Passed - 9%
Total Load (TL) Pos. Defl.:	4'- 7 1/16"	D + L	0.033"		L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	0.71	579 lb		1928 lb	-	Passed - 30%
2	5-08	1.25D + 1.5S + L	0.67	727 lb		6671 lb	3946 lb	Passed - 18%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	9'- 6 3/4"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	9'- 6 3/4"	FC1 Floor Decking (Plan View Fill)	Top	10 lb/ft	21 lb/ft	-	-
Uniform	0'	9'- 1 1/4"	User Load	Top	60 lb/ft	-	-	-
Point	9'- 4"	9'- 4"	E6(i834)	Top	66 lb	-	66 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B7(i10854)	348 lb	95 lb	-	-
2	9'- 1 1/4"	9'- 6 3/4"	W39(i58)	420 lb	103 lb	66 lb	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071200



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B2 - i10777
Type: Beam

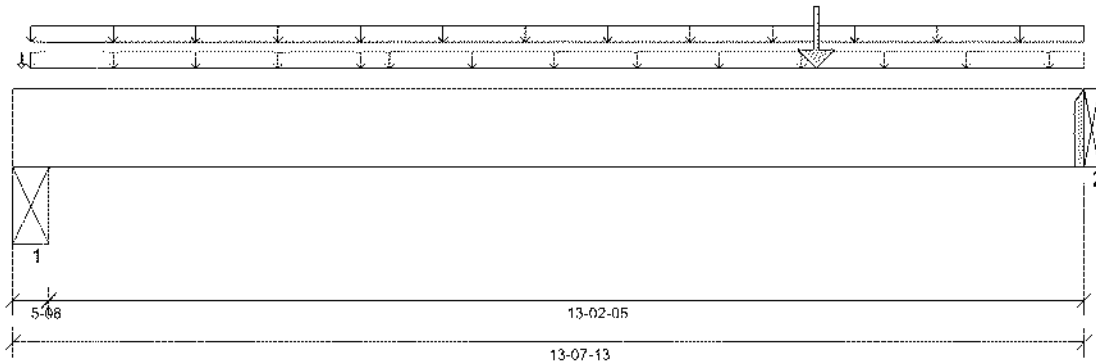
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



DESIGN INFORMATION

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

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240.

Lateral Restraint Requirements:

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

Top: 0' Bottom: 13'- 2 5/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 13'- 7 13/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	10'- 2 13/16"	1.25D + 1.5L	1.00	5237 lb ft	35345 lb ft	Passed - 15%
Factored Shear:	12'- 7 15/16"	1.25D + 1.5L	1.00	1570 lb	13815 lb	Passed - 11%
Live Load (LL) Pos. Defl.:	7'- 7 9/16"	L		0.059"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 7 1/16"	D + L		0.105"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08	1.25D + 1.5L	1.00	780 lb		20020 lb	11839 lb	Passed - 7%
2	1'-08	1.25D + 1.5L	1.00	1624 lb		5460 lb	-	Passed - 30%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 7 13/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'- 2 3/4"	13'- 7 13/16"	FC1 Floor Decking (Plan View Filt)	Top	3 lb/ft	6 lb/ft	-	-
Uniform	0'- 2 3/4"	4'- 9 5/8"	FC1 Floor Decking (Plan View Filt)	Top	4 lb/ft	9 lb/ft	-	-
Uniform	4'- 9 5/8"	13'- 7 13/16"	FC1 Floor Decking (Plan View Filt)	Top	5 lb/ft	10 lb/ft	-	-
Point	0'- 1 3/8"	0'- 1 3/8"	FC1 Floor Decking (Plan View Filt)	Top	1 lb	2 lb	-	-
Point	10'- 2 13/16"	10'- 2 13/16"	PBO5(i1037)	Top	505 lb	739 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i47)	266 lb	297 lb	-	-
2	13'- 7 13/16"	13'- 7 13/16"	B5(i10790)	509 lb	659 lb	-	-

DESIGN NOTES

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

PLY TO PLY CONNECTION

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071201



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B3 - i10855
Type: Beam

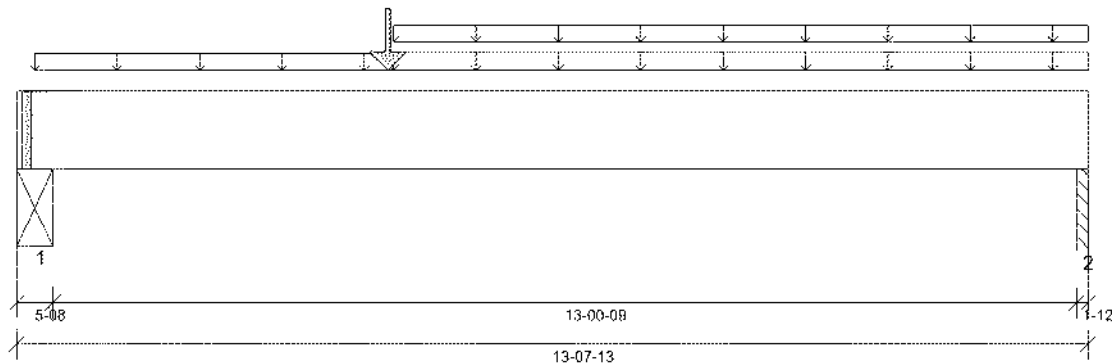
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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: 8'- 10 3/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Column @ 13'- 7 1/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 8 3/4"	1.25D + 1.5L	0.95	5660 lb ft	16780 lb ft	Passed - 34%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.95	1350 lb	6559 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	6'- 5 7/16"	L		0.114"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 8 1/8"	D + L		0.245"	L/240	Passed - L/638

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	0.95	1407 lb		9504 lb	5620 lb	Passed - 25%
2	1-12	1.4D	0.65	759 lb		2070 lb	1224 lb	Passed - 62%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 7 13/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 2 3/4"	4'- 9 5/8"	FC1 Floor Decking (Plan View Fil)	Top	9 lb/ft	18 lb/ft	-	-
Uniform	4'- 9 5/8"	13'- 7 13/16"	User Load	Top	60 lb/ft	-	-	-
Uniform	4'- 9 5/8"	13'- 7 13/16"	FC1 Floor Decking (Plan View Fil)	Top	5 lb/ft	10 lb/ft	-	-
Point	4'- 5 3/4"	4'- 8 3/4"	B4(i10796)	Front	334 lb	646 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i47)	486 lb	526 lb	-	-
2	13'- 5 1/16"	13'- 7 13/16"	PBO3(i256)	545 lb	292 lb	-	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071202



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B4 - i10796
Type: Beam

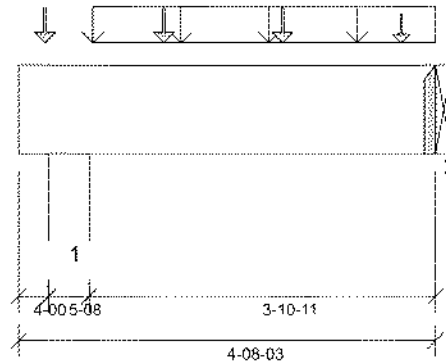
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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/180,

TL Deflection Limit: L/120.

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 6 3/4"
- 615 psi Beam @ 4'- 8 3/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 9 5/16"	1.25D + 1.5L	1.00	1452 lb ft	17672 lb ft	Passed - 8%
Factored Shear:	3'- 8 5/16"	1.25D + 1.5L	1.00	733 lb	6908 lb	Passed - 11%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	1537 lb		10010 lb	5921 lb	Passed - 26%
2	1-08	1.25D + 1.5L	1.00	1419 lb		2730 lb	-	Passed - 52%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 8 3/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 10"	4'- 8 3/16"	User Load	Top	120 lb/ft	240 lb/ft	-	-
Point	0'- 3 9/16"	0'- 3 9/16"	J6(i10462)	Back	63 lb	126 lb	-	-
Point	1'- 7 9/16"	1'- 7 9/16"	J6(i10792)	Back	60 lb	122 lb	-	-
Point	2'- 11 9/16"	2'- 11 9/16"	J6(i10826)	Back	61 lb	122 lb	-	-
Point	4'- 3 9/16"	4'- 3 9/16"	J6(i10549)	Back	41 lb	82 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'- 4"	0'- 9 1/2"	W29(i44)	380 lb	730 lb	-	-
2	4'- 8 3/16"	4'- 8 3/16"	B3(i10855)	334 lb	646 lb	-	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071203



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B5 - i10790
Type: Beam

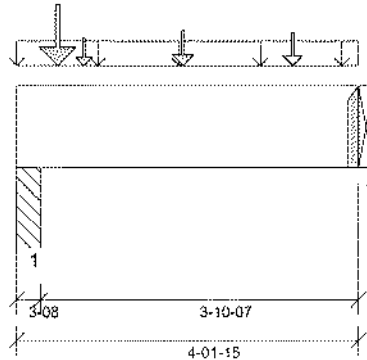
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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 Beam @ 4'- 1 15/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 5/16"	1.25D + 1.5L	1.00	1861 lb ft	17672 lb ft	Passed - 11%
Factored Shear:	3'- 2 1/16"	1.25D + 1.5L	1.00	654 lb	6908 lb	Passed - 9%

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	2974 lb		6370 lb	3767 lb	Passed - 79%
2	1-08	1.25D + 1.5L	1.00	1560 lb		2730 lb	-	Passed - 57%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 1 15/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	-0'	4'- 1 15/16"	User Load	Front	60 lb/ft	120 lb/ft	-	-
Point	0'- 6"	0'- 6"	B2(i10777)	Back	509 lb	659 lb	-	-
Point	0'- 9 13/16"	0'- 9 13/16"	J3(i10609)	Back	103 lb	207 lb	-	-
Point	2'- 5/16"	2'- 5/16"	J3(i10678)	Back	172 lb	345 lb	-	-
Point	3'- 4 5/16"	3'- 4 5/16"	J3(i10494)	Back	150 lb	299 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PB03(i256)	864 lb	1343 lb	-	-
2	4'- 1 15/16"	4'- 1 15/16"	B6(i10812)	345 lb	666 lb	-	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071204



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B6 - i10812
Type: Beam

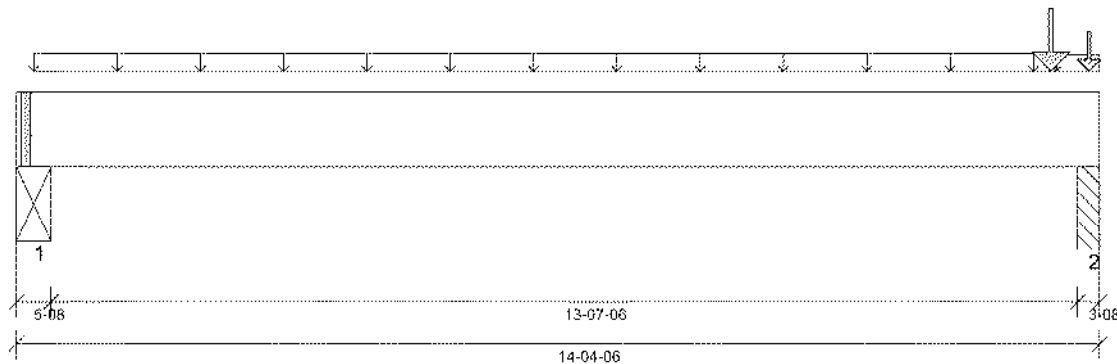
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



DESIGN INFORMATION

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

Lateral Restraint Requirements:

Both ends of the member and the outer supports
must be laterally restrained. Top and bottom edges
of the member must be fully restrained or have the
following maximum unbraced length:
Top: 0' Bottom: 13'- 2 5/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Column @ 14'- 1 7/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 10 1/2"	1.25D + 1.5L	1.00	1802 lb ft	17672 lb ft	Passed - 10%
Factored Neg. Moment:	14'- 1 7/8"	1.25D + 1.5L	1.00	82 lb ft	3403 lb ft	Passed - 2%
Factored Shear:	13'- 1"	1.25D + 1.5L	1.00	1764 lb	6908 lb	Passed - 26%
Live Load (LL) Pos. Defl.:	7'- 5 1/2"	L		0.057"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 5 1/4"	D + L		0.095"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08"	1.25D + 1.5L	1.00	492 lb		10010 lb	5919 lb	Passed - 8%
2	3'-08"	1.25D + 1.5L	1.00	3032 lb		6370 lb	3767 lb	Passed - 80%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	14'- 4 3/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 2 3/4"	13'- 9 9/16"	FC1 Floor Decking (Plan View File)	Top	13 lb/ft	27 lb/ft	-	-
Uniform	13'- 9 9/16"	14'- 4 3/8"	FC1 Floor Decking (Plan View File)	Top	5 lb/ft	11 lb/ft	-	-
Point	13'- 8 11/16"	13'- 8 11/16"	B5(i10790)	Front	345 lb	666 lb	-	-
Point	14'- 2 5/8"	14'- 2 5/8"	User Load	Top	120 lb	240 lb	-	-
Point	14'- 2 3/4"	14'- 2 3/4"	4(i983)	Top	303 lb	211 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (47)	145 lb	203 lb	-	-
2	14'- 7/8"	14'- 4 3/8"	PBO4(i257)	892 lb	1282 lb	-	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071205



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A STD
Level: 1ST FLOOR
Label: B7 - i10854
Type: Beam

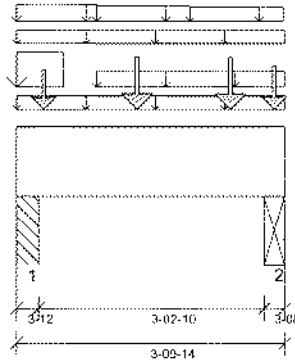
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:20



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 3/4"
- 615 psi Beam @ 3'- 7 3/8"

PLY TO PLY CONNECTION:
4 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 # TF22071206

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 8 5/8"	1.25D + 1.5L	1.00	2592 lb ft	35233 lb ft	Passed - 7%
Factored Shear:	2'- 6 1/2"	1.25D + 1.5L	1.00	1868 lb	13772 lb	Passed - 14%

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	3-12	1.25D + 1.5L	1.00	5608 lb		13607 lb	8046 lb	Passed - 70%
2	3-08	1.25D + 1.5L	1.00	3702 lb		12700 lb	7510 lb	Passed - 49%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 9 7/8"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	3'- 9 7/8"	4(983)	Top	81 lb/ft	-	-	-
Uniform	0'	3'- 9 7/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'	1'- 1 11/16"	4(983)	Top	174 lb/ft	347 lb/ft	-	-
Uniform	0'	0'- 8"	4(983)	Top	1818 lb/ft	1097 lb/ft	-	-
Uniform	1'- 1 11/16"	2'- 5 5/8"	4(983)	Top	95 lb/ft	189 lb/ft	-	-
Uniform	2'- 5 5/8"	3'- 9 5/8"	4(983)	Top	47 lb/ft	95 lb/ft	-	-
Tapered	1'- 1 11/16"	3'- 9 7/8"	4(983)	Top	140 lb/ft	278 To 279 lb/ft	-	-
Point	3'- 8 1/8"	3'- 8 1/8"	B1(i10811)	Front	348 lb	95 lb	-	-
Point	0'- 4 5/8"	0'- 4 5/8"	J3(i10675)	Back	129 lb	258 lb	-	-
Point	1'- 8 5/8"	1'- 8 5/8"	J3(i10550)	Back	190 lb	381 lb	-	-
Point	3'- 5/8"	3'- 5/8"	J3(i10648)	Back	188 lb	377 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 3/4"	PB04(i257)	2114 lb	2001 lb	-	-
2	3'- 6 3/8"	3'- 9 7/8"	STL BM (448)	1298 lb	1362 lb	-	-

DESIGN NOTES

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

PLY TO PLY CONNECTION

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



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV A OPT SUNKEN
Level: 1ST FLOOR
Label: B20 H - i11175
Type: Beam

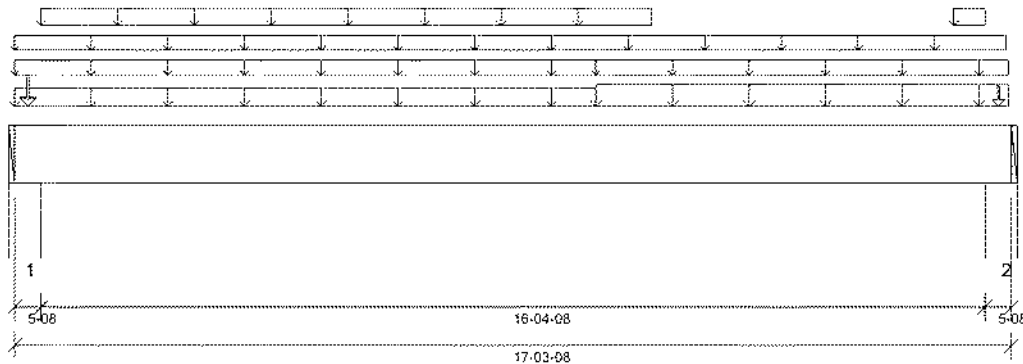
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:24



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'- 4 1/2"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 16'- 11"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	9'- 1/8"	1.25D + 1.5L	0.99	8263 lb ft	17495 lb ft	Passed - 47%
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5L + S	0.99	42 lb ft	2741 lb ft	Passed - 2%
Factored Shear:	15'- 10 1/8"	1.25D + 1.5L	0.99	1804 lb	6838 lb	Passed - 26%
Live Load (LL) Pos. Defl.:	8'- 10 1/8"	L		0.301"	L/360	Passed - L/652
Total Load (TL) Pos. Defl.:	8'- 8 3/8"	D + L		0.626"	L/240	Passed - L/313
Permanent Deflection:	8'- 6 13/16"			-	L/360	Passed - L/622

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08	1.25D + 1.5L + S	0.99	2190 lb		9956 lb	5889 lb	Passed - 37%
2	5'-08	1.25D + 1.5L + S	0.99	2300 lb		9956 lb	5889 lb	Passed - 39%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	17'- 3 1/2"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	-0'	17'- 2 3/8"	FC1 Floor Decking (Plan View File)	Top	5 lb/ft	9 lb/ft	-	-
Uniform	-0'	10'- 1"	FC1 Floor Decking (Plan View File)	Top	26 lb/ft	51 lb/ft	-	-
Uniform	0'	10'- 1"	FC1 Floor Decking (Plan View File)	Top	3 lb/ft	6 lb/ft	-	-
Uniform	0'- 5 1/2"	11'- 1/2"	User Load	Top	60 lb/ft	-	-	-
Uniform	10'- 1"	17'- 2 15/16"	FC1 Floor Decking (Plan View File)	Top	50 lb/ft	99 lb/ft	-	-
Uniform	10'- 1"	17'- 2 15/16"	FC1 Floor Decking (Plan View File)	Top	5 lb/ft	10 lb/ft	-	-
Uniform	16'- 3 1/2"	16'- 10"	User Load	Top	60 lb/ft	-	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E82(10067)	Top	77 lb	59 lb	34 lb	-
Point	17'- 13/16"	17'- 13/16"	6(984)	Top	45 lb	1 lb	34 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	W93(110023)	883 lb	705 lb	35 lb	-
2	16'- 10"	17'- 3 1/2"	W30(145)	766 lb	869 lb	33 lb	-

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY
DWG # TF22071207



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV B STD
Level: 2ND FLOOR
Label: B30 - i11554
Type: Beam

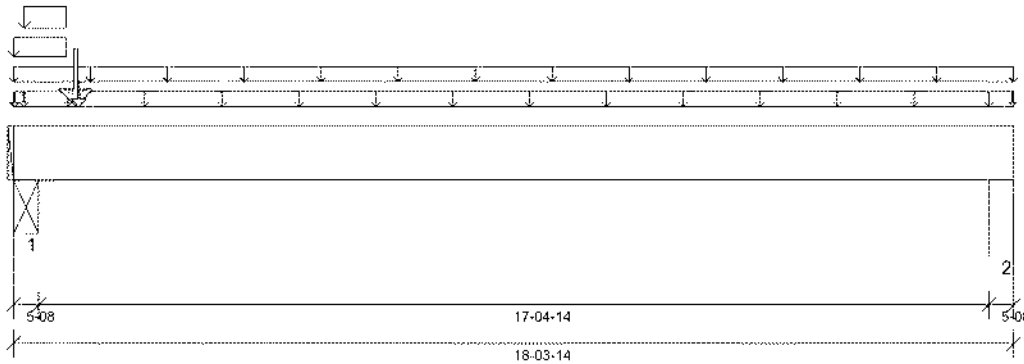
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:31



DESIGN INFORMATION

Building Code: NBCC 2015, Part9, CBC 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'- 6 15/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Wall @ 17'- 11 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 9 7/16"	1.25D + 1.5L + S	0.99	4114 lb ft	35120 lb ft	Passed - 12%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.93	3524 lb	12815 lb	Passed - 28%
Live Load (LL) Pos. Defl.:	8'- 6 3/8"	L + 0.5S		0.085"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 6 3/4"	D + L + 0.5S		0.172"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08"	1.25D + 1.5S + L	0.97	4711 lb		19402 lb	11473 lb	Passed - 41%
2	5'-08"	1.25D + 1.5L	0.93	663 lb		18570 lb	10985 lb	Passed - 6%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	18'- 3 7/8"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	0'- 11 9/16"	E47(i2076)	Top	100 lb/ft	-	-	-
Uniform	0'- 2 5/16"	0'- 11 9/16"	E47(i2076)	Top	48 lb/ft	-	101 lb/ft	-
Tapered	-0'	18'- 3 7/8"	FC2 Floor Decking (Plan View File)	Top	4 To 4 lb/ft	8 To 7 lb/ft	-	-
Tapered	-0'	0'- 11 15/16"	FC2 Floor Decking (Plan View File)	Top	3 To 3 lb/ft	6 To 6 lb/ft	-	-
Tapered	0'- 11 15/16"	17'- 10 3/8"	FC2 Floor Decking (Plan View File)	Top	6 To 6 lb/ft	11 To 12 lb/ft	-	-
Tapered	17'- 10 3/8"	18'- 3 7/8"	FC2 Floor Decking (Plan View File)	Top	3 lb/ft	7 To 7 lb/ft	-	-
Point	1'- 1 11/16"	1'- 1 11/16"	B31(i11545)	Front	1136 lb	1046 lb	458 lb	-
Point	0'- 1/4"	0'- 1/4"	E47(i2076)	Top	4 lb	-	-	-
Point	0'- 2 5/16"	0'- 2 5/16"	E47(i2076)	Top	11 lb	-	23 lb	-
Point	1'- 2 5/16"	1'- 2 5/16"	E63(i2398)	Top	273 lb	-	434 lb	-
Point	18'- 3 5/8"	18'- 3 5/8"	FC2 Floor Decking (Plan View File)	Top	3 lb	5 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i1040)	1701 lb	1180 lb	960 lb	-
2	17'- 10 3/8"	18'- 3 7/8"	5(i985)	249 lb	217 lb	32 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 1. Required Load Area: L=3.500", W=3.500", LDF=0.97, Pf=3469 lb, Qr=10920 lb, Result=31.77%.

PLY TO PLY CONNECTION



STRUCTURAL COMPONENT ONLY
DWG # TF22071208 PG 1/2



BUILDER:	ROYAL PINE HOMES	Job Name:	4501 ELEV B STD	2 Ply Member	Status:
SITE:	FORESTSIDE ESTATES	Level:	2ND FLOOR	1 3/4" x 11 7/8" (2.0E 3100)	Design
MODEL:	4501	Label:	B30 - I11554	WestFraser LVL	Passed
CITY:	BRAMPTON	Type:	Beam		

PLY TO PLY CONNECTION

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





BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4501
CITY: BRAMPTON

Job Name: 4501 ELEV B STD
Level: 2ND FLOOR
Label: B31 - i11545
Type: Beam

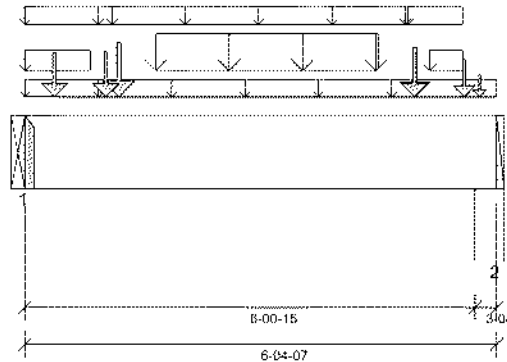
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 07/15/2022 14:31



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 Wall @ 6'- 1 15/16"

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

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 3 1/4"	1.25D + 1.5L + S	1.00	5024 lb ft	35345 lb ft	Passed - 14%
Factored Shear:	5'- 1 1/16"	1.25D + 1.5L + S	1.00	3341 lb	13815 lb	Passed - 24%
Live Load (LL) Pos. Defl.:	3'- 15/16"	L + 0.5S		0.014"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 15/16"	D + L + 0.5S		0.026"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L + S	1.00	3412 lb		5460 lb	-	Passed - 62%
2	3-08	1.25D + 1.5L + S	1.00	3566 lb		12740 lb	7536 lb	Passed - 47%

CONNECTOR INFORMATION

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

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

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 4 7/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	-0'	1'- 2 1/8"	E63(i2398)	Top	100 lb/ft	-	-	-
Uniform	-0'	0'- 10 5/8"	E63(i2398)	Top	48 lb/ft	-	101 lb/ft	-
Uniform	0'- 1/16"	6'- 4 7/16"	User Load	Front	28 lb/ft	-	48 lb/ft	-
Uniform	1'- 2 1/8"	5'- 2 1/8"	E64(i2399)	Top	100 lb/ft	-	-	-
Uniform	1'- 9 1/4"	4'- 9 1/4"	Smoothed Load	Back	174 lb/ft	348 lb/ft	-	-
Uniform	5'- 2 1/8"	5'- 10 15/16"	E46(i2075)	Top	100 lb/ft	-	-	-
Uniform	5'- 5 5/8"	5'- 10 15/16"	E46(i2075)	Top	48 lb/ft	-	101 lb/ft	-
Point	0'- 4 13/16"	0'- 4 13/16"	J1(i11557)	Back	124 lb	248 lb	-	-
Point	1'- 3 1/4"	1'- 3 1/4"	J1(i11560)	Back	163 lb	326 lb	-	-
Point	5'- 3 1/4"	5'- 3 1/4"	J1(i11483)	Back	145 lb	289 lb	-	-
Point	5'- 11 3/16"	5'- 11 3/16"	J1(i11431)	Back	95 lb	191 lb	-	-
Point	1'- 1 1/8"	1'- 1 1/8"	E63(i2398)	Top	145 lb	-	233 lb	-
Point	5'- 3 1/8"	5'- 3 1/8"	E46(i2075)	Top	144 lb	-	230 lb	-
Point	6'- 1 11/16"	6'- 1 11/16"	E79(i3211)	Top	49 lb	10 lb	44 lb	-

UNFACTORED REACTIONS


ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B30(i11554)	1136 lb	1046 lb	458 lb	-
2	6'- 15/16"	6'- 4 7/16"	E42(i1035)	1160 lb	1062 lb	489 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071209 PG 1/2

	BUILDER: ROYAL PINE HOMES SITE: FORESTSIDE ESTATES MODEL: 4501 CITY: BRAMPTON	Job Name: 4501 ELEV B STD Level: 2ND FLOOR Label: B31 - i11545 Type: Beam	2 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	Status: Design Passed
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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

- 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.



Maximum Floor Spans – S2.1

Design Criteria

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

Maximum Floor Spans

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

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

Notes:

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

Maximum Floor Spans

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

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

Notes:

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

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

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

Notes:

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

Maximum Floor Spans – S7.1

Design Criteria

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

Maximum Floor Spans

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

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

Notes:

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

Maximum Floor Spans

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

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

Notes:

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

Maximum Floor Spans

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

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

Notes:

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 – M6.1

Design Criteria

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

Maximum Floor Spans

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

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

Notes:

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

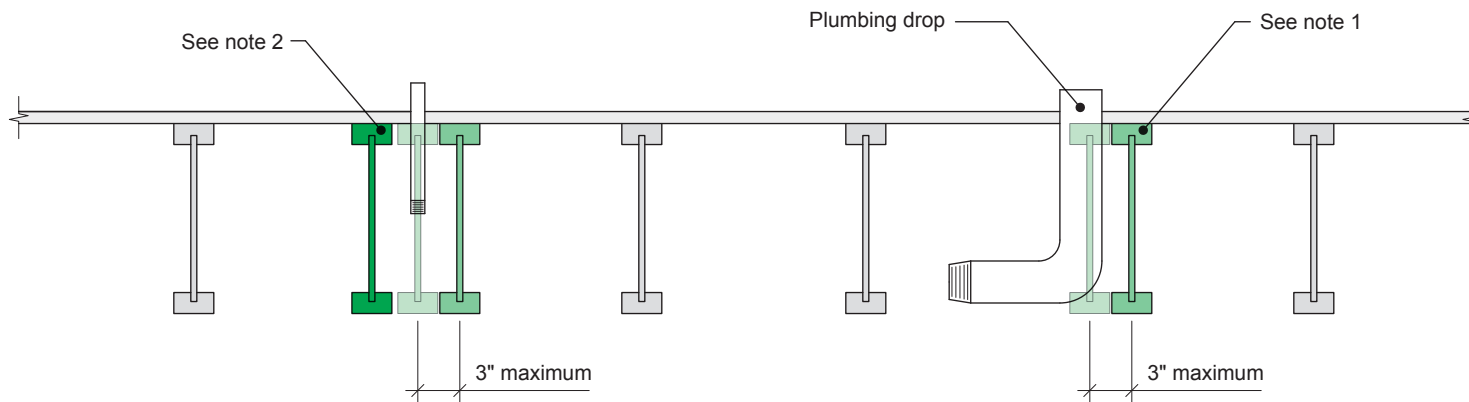
Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	14'-11"
	NI-60	17'-1"	16'-1"	15'-6"	14'-10"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

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

Notes:

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.

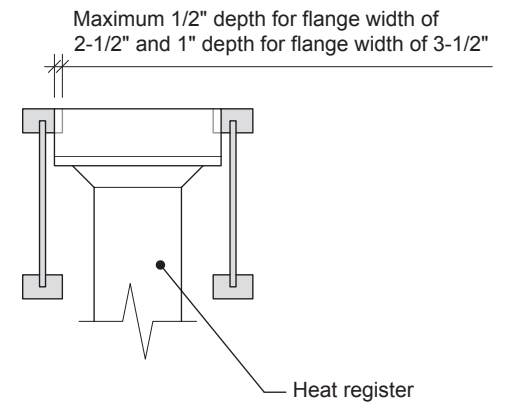
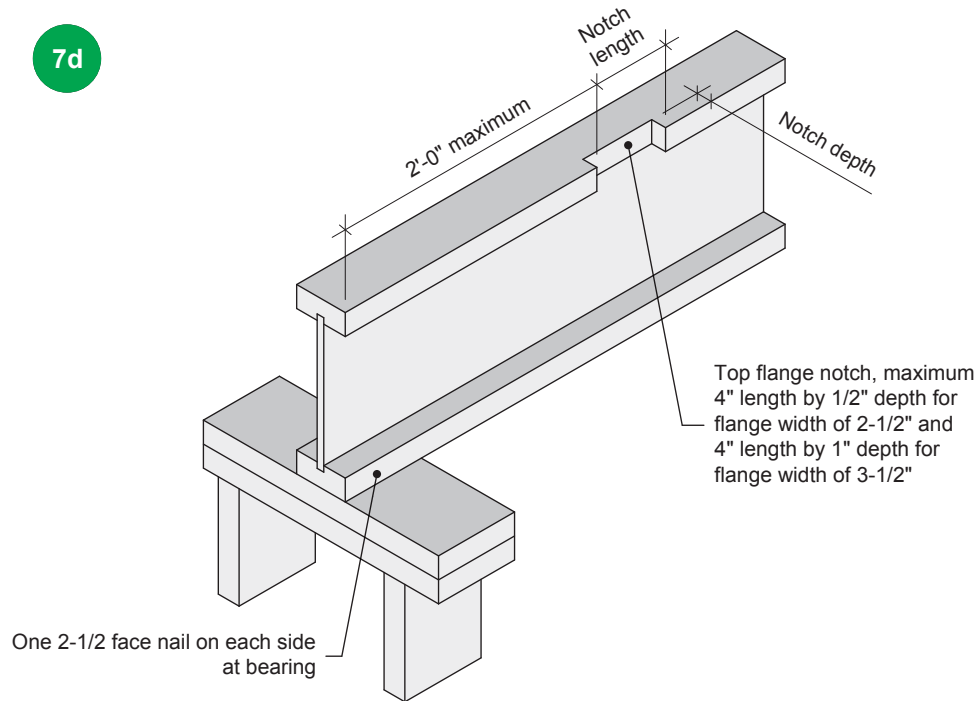
7c

**Notes:**

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

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

7d



Notes:

1. Blocking required at bearing for lateral support, not shown for clarity.
2. The maximum dimensions for a notch on the side of the top flange are 4-inch length by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch length by 1-inch depth for flange width of 3-1/2 inches.
3. This detail applies to simple-span joists and multiple-span joists where the notch is located at the end half-span.
4. For other applications, contact Nordic Structures.

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