

**S42 - 1B (LOFT)
ELEV. "A"**

FIRST FLOOR FRAMING

HATCH LEGEND	
	CERAMIC TILES

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	43
J3	14-00-00	9 1/2" NI-40x	2	8
J4	12-00-00	9 1/2" NI-40x	1	7
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	7
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	9
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE:
H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

File: 287855 (248697)

Builder: Bayview Wellington Homes

Project: Green Valley Estates East

Location: Bradford

Date: Sept 08, 2017

Designer: FC/SG

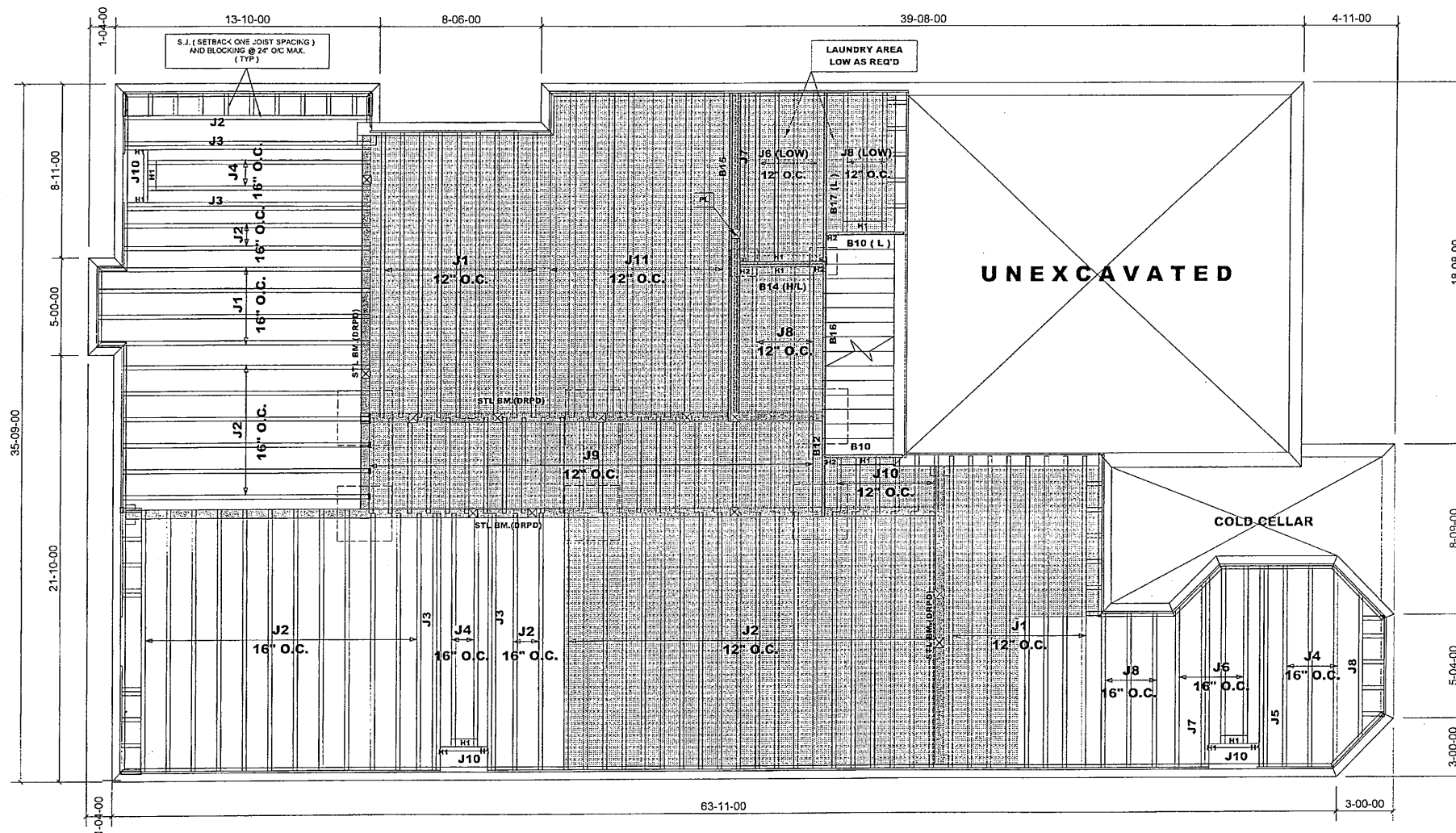
Sheet: 2 of 2

Alpa Roof Trusses Inc.

Maple, Ontario

Salesperson: Mario.

Tamarack Lumber



S42 - 1B (LOFT) ELEV. "A"
SUNKEN LAUNDRY COND.

& w/ upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural
 plans for dimensions

HATCH LEGEND	
	CERAMIC TILES

Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
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J4	12-00-00	9 1/2" NI-40x	1	7
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	7
J7	10-00-00	9 1/2" NI-40x	2	4
J8	8-00-00	9 1/2" NI-40x	1	11
J9	6-00-00	9 1/2" NI-40x	1	24
J10	4-00-00	9 1/2" NI-40x	1	9
J11	18-00-00	9 1/2" NI-80	1	10
B15	18-00-00	VERSALAM-10 2.0E	4	4
B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE.

H1 US2.56/9.5 (FM)
 H2 HUS1.61/10 (FM)

NOTE :

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SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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JT: 44997/94450

File: 287855(248697)

Builder: Bayview Wellington Homes

Project: Green Valley Estates East

Location: Bradford

Date: Sept. 8, 2017

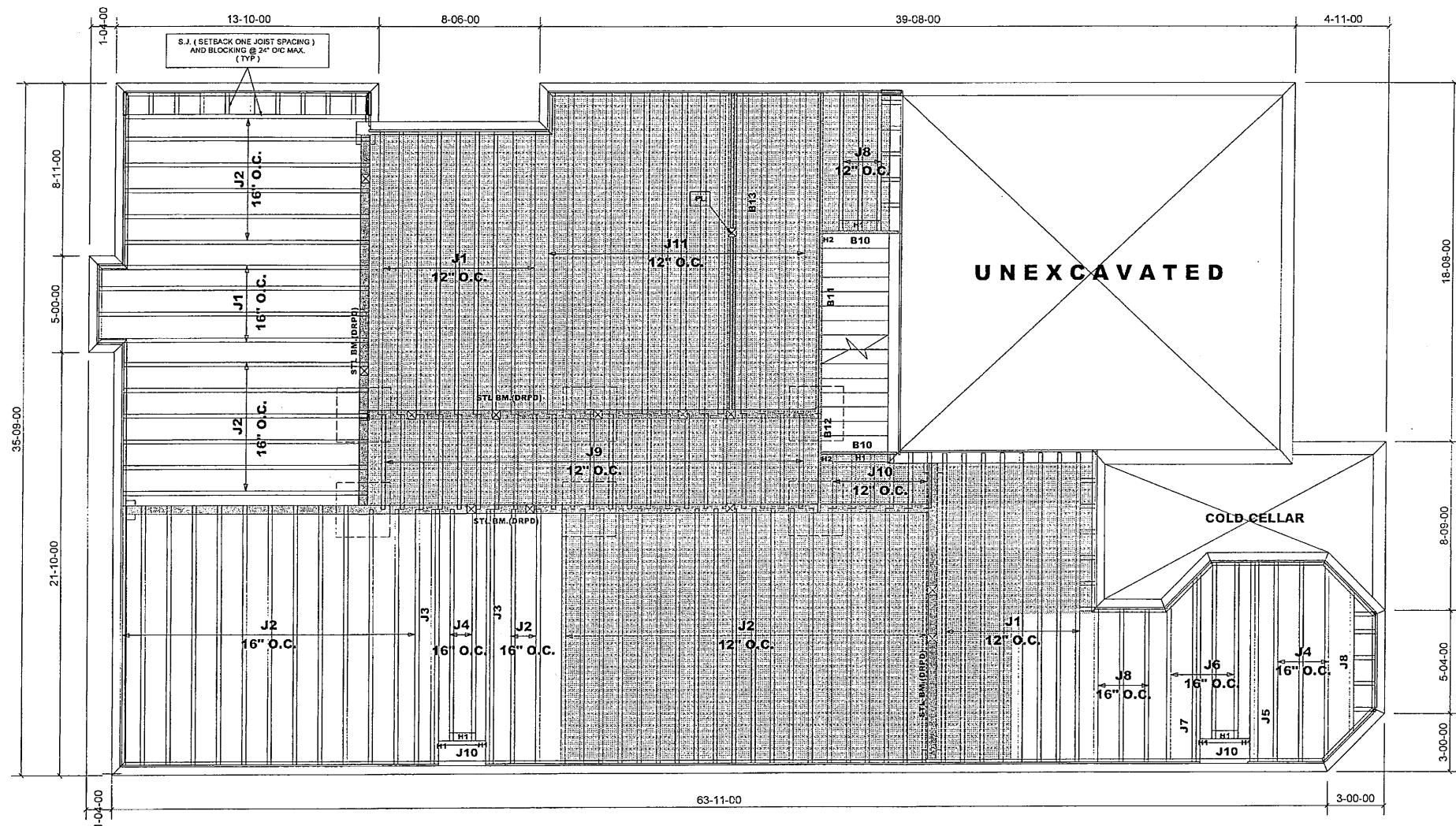
Designer: FC/SG

Sheet: 3 of 21

Alpa Roof Trusses Inc.
 Maple, Ontario

Salesperson: Mario.
 Tamarack Lumber

Site Copy



S42 - 1B (LOFT) ELEV. "A"
W.O.B. COND.

ξ w/ upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural
plans for dimensions

MATCH LEGEND	
	CERAMIC TILES

Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	47
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	5
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	7
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE

H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

File: 287855(248697)

Builder: Bayview Wellington Homes

Project: Green Valley Estates East

Location: Bradford

Date: Sept. 8, 2017

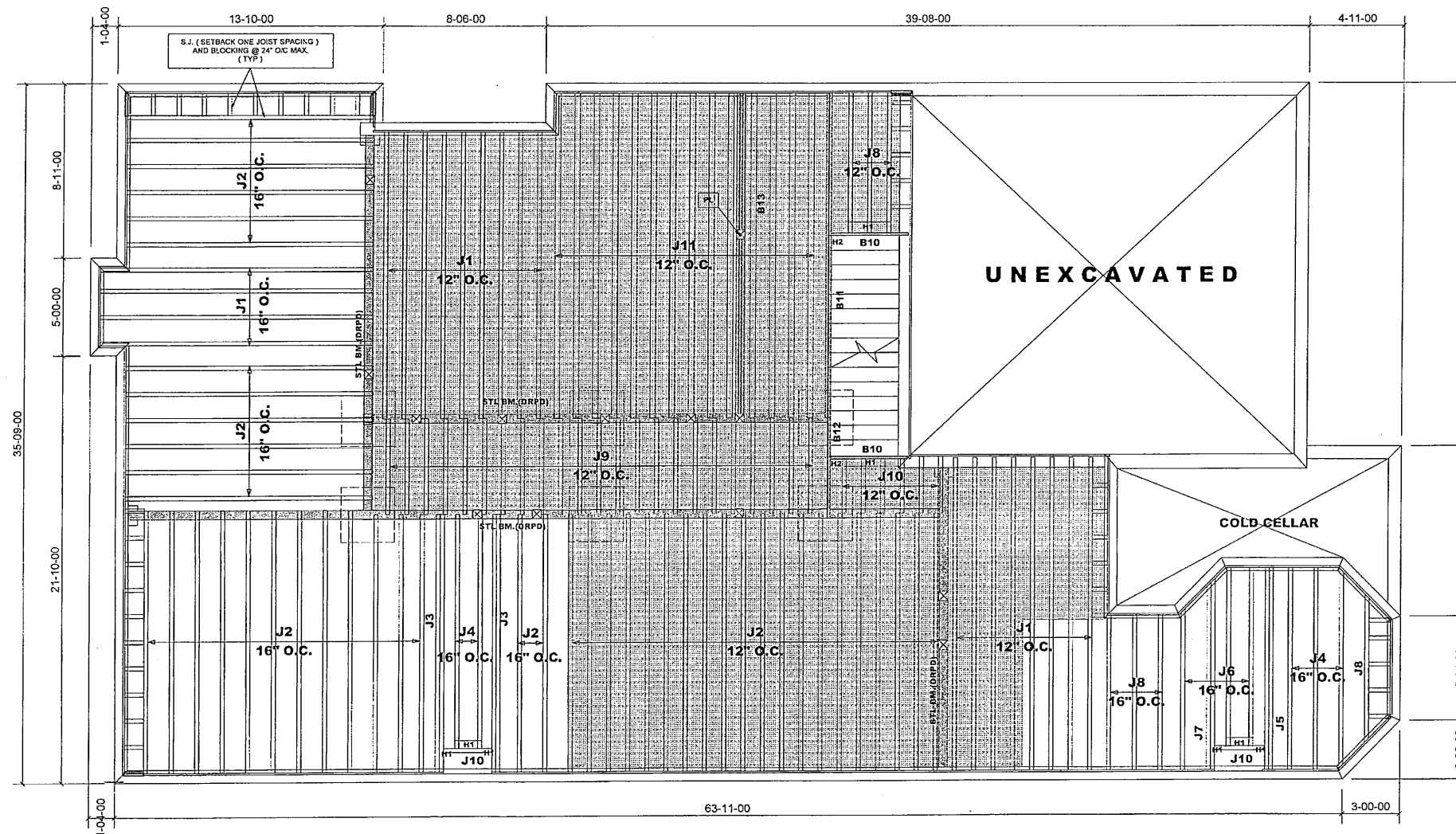
Designer: FC/SG

Sheet: 4 of 21

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

Site Copy



S42 - 1B (LOFT) ELEV. "A"
W.O.D. COND.

W/ upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

HATCH LEGEND
CERAMIC TILES

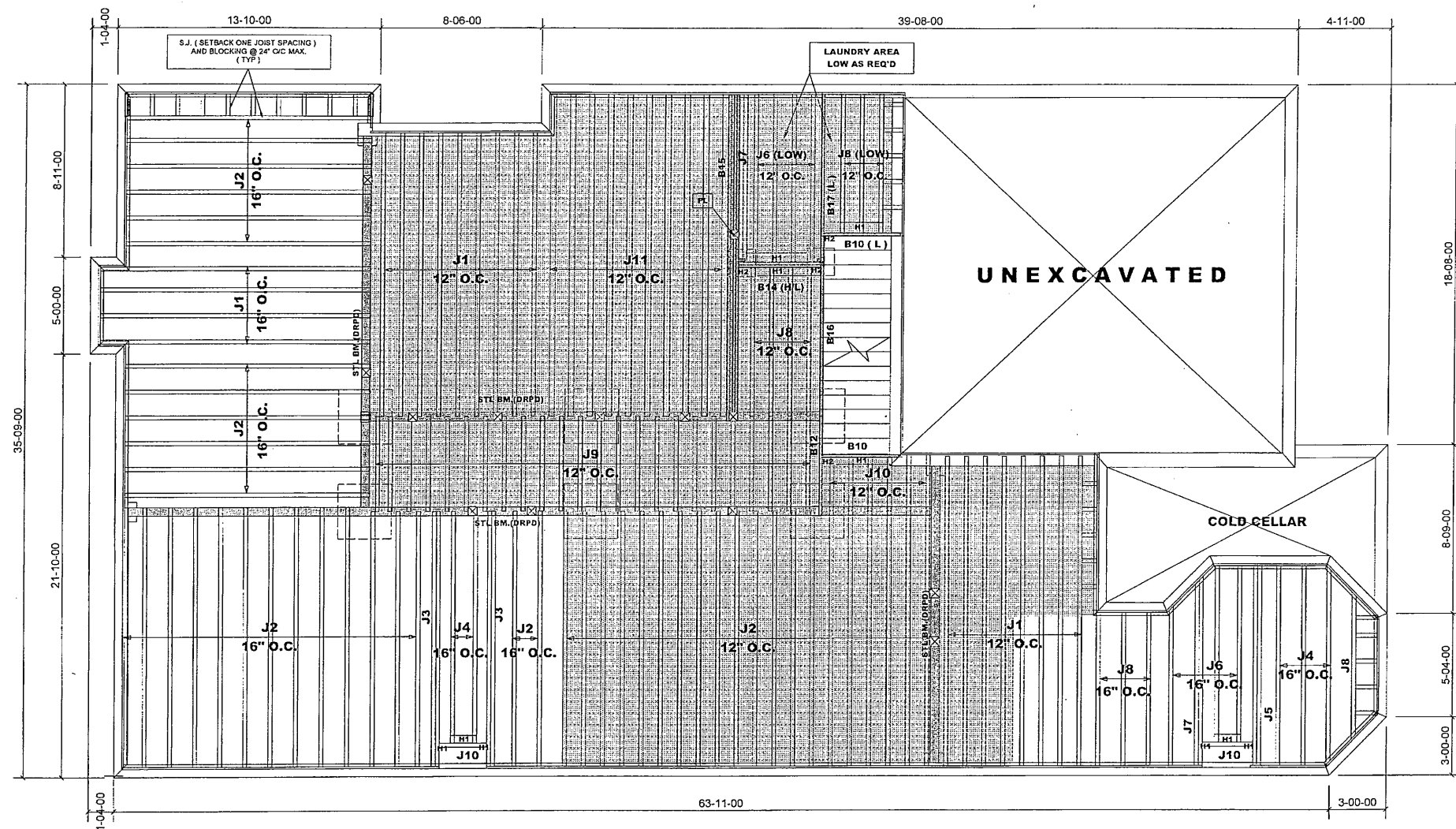
Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	46
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	5
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	7
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE:
H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)

NOTE :
TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED
RIMBOARD
1 - 1/8" X 9-1/2" O.S.B.

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Multiple squash blocks are required under concentrated loads.
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S42 - 1B (LOFT) ELEV. "A"
SUNKEN LAUNDRY &
W.O.B COND.

& w/upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural
plans for dimensions

HATCH LEGEND
CERAMIC TILES

Products				
PlotID	Length	Product	Plies	Net Qty
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J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	5
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	7
J7	10-00-00	9 1/2" NI-40x	2	4
J8	8-00-00	9 1/2" NI-40x	1	11
J9	6-00-00	9 1/2" NI-40x	1	24
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	10
B15	18-00-00	VERSALAM-10 2.0E	4	4
B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE.

H1 IUS2.56/9.5 (FM)
H2 HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side
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concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

File: 287855(248697)

Builder: Bayview Wellington Homes

Project: Green Valley Estates East

Location: Bradford

Date: Sept. 8, 2017

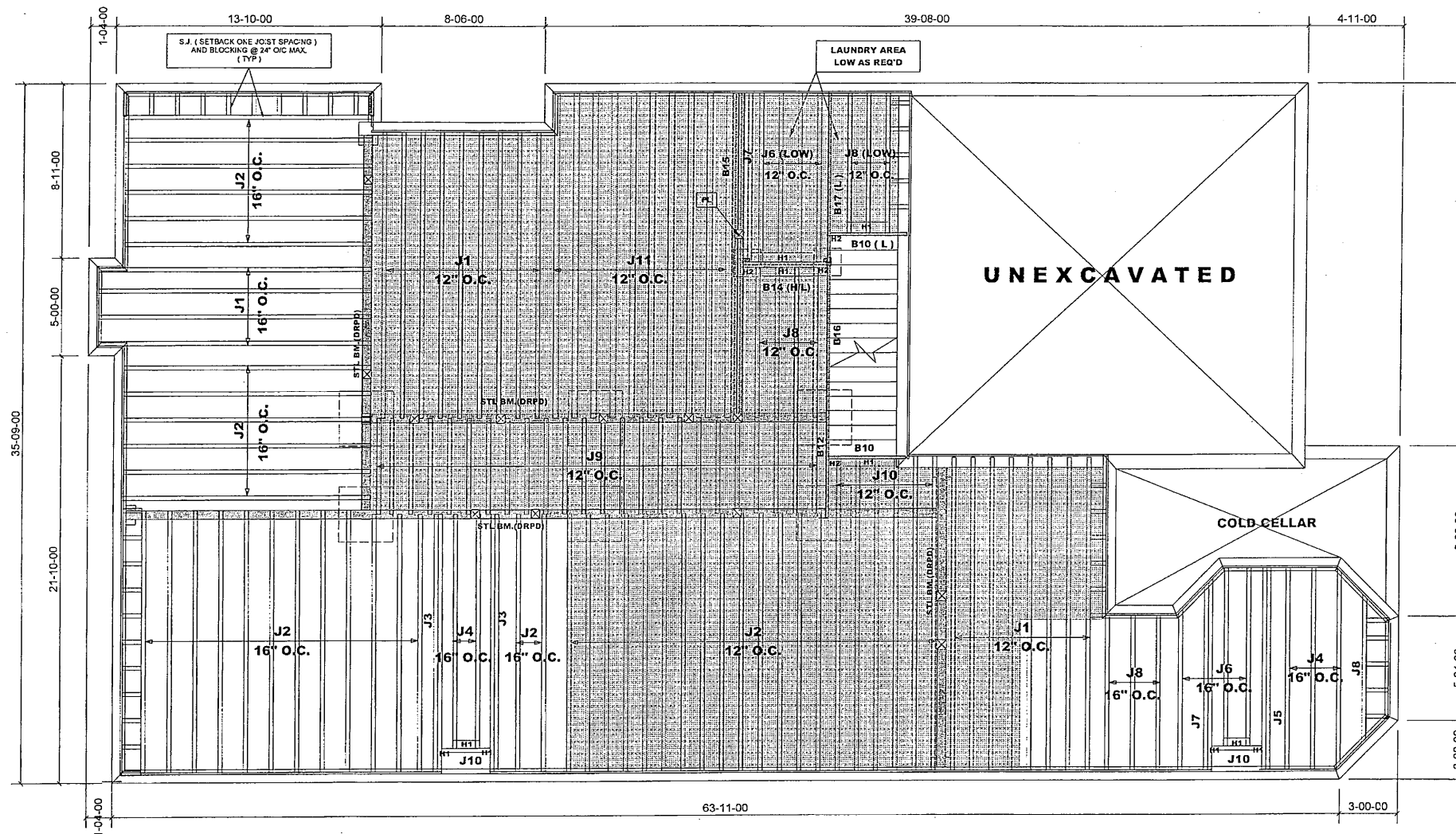
Designer: FC/SG

Sheet: 6 of 21

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

Site Copy



S42 - 1B (LOFT) ELEV. "A"
SUNKEN LAUNDRY &
W.O.D COND.

& w/ upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural
plans for dimensions

HATCH LEGEND	
	CERAMIC TILES

Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	46
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	5
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	7
J7	10-00-00	9 1/2" NI-40x	2	4
J8	8-00-00	9 1/2" NI-40x	1	11
J9	6-00-00	9 1/2" NI-40x	1	24
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	10
B15	18-00-00	VERSALAM-10 2.0E	4	4
B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE:

H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

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File: 287855(248697)

Builder: Bayview Wellington Homes

Project: Green Valley Estates East

Location: Bradford

Date: Sept. 8, 2017

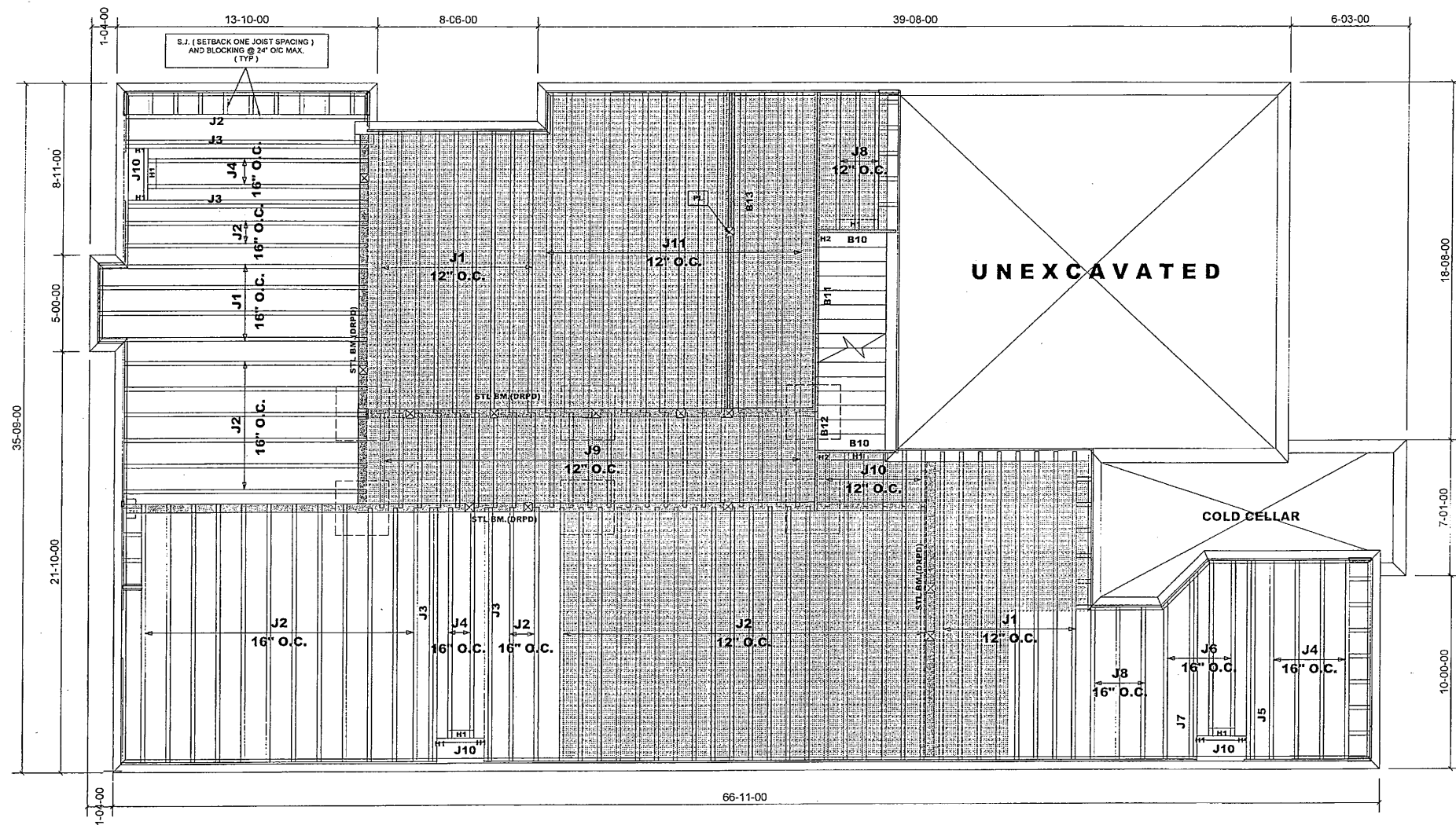
Designer: FC/SG

Sheet: 7 of 21

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

Site Copy



S42 - 1B (LOFT)
ELEV. " B "

1/2 w/ upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

HATCH LEGEND	
	CERAMIC TILES

Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	43
J3	14-00-00	9 1/2" NI-40x	2	8
J4	12-00-00	9 1/2" NI-40x	1	8
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	6
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	9
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE.

H1 IUS2.56/9.5 (FM)
H2 HUS1.81/10 (FM)

NOTE :

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FM - Face Mount Hanger
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File: 287855(248697)

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Project: Green Valley Estates East

Location: Bradford

Date: Sept. 8, 2017

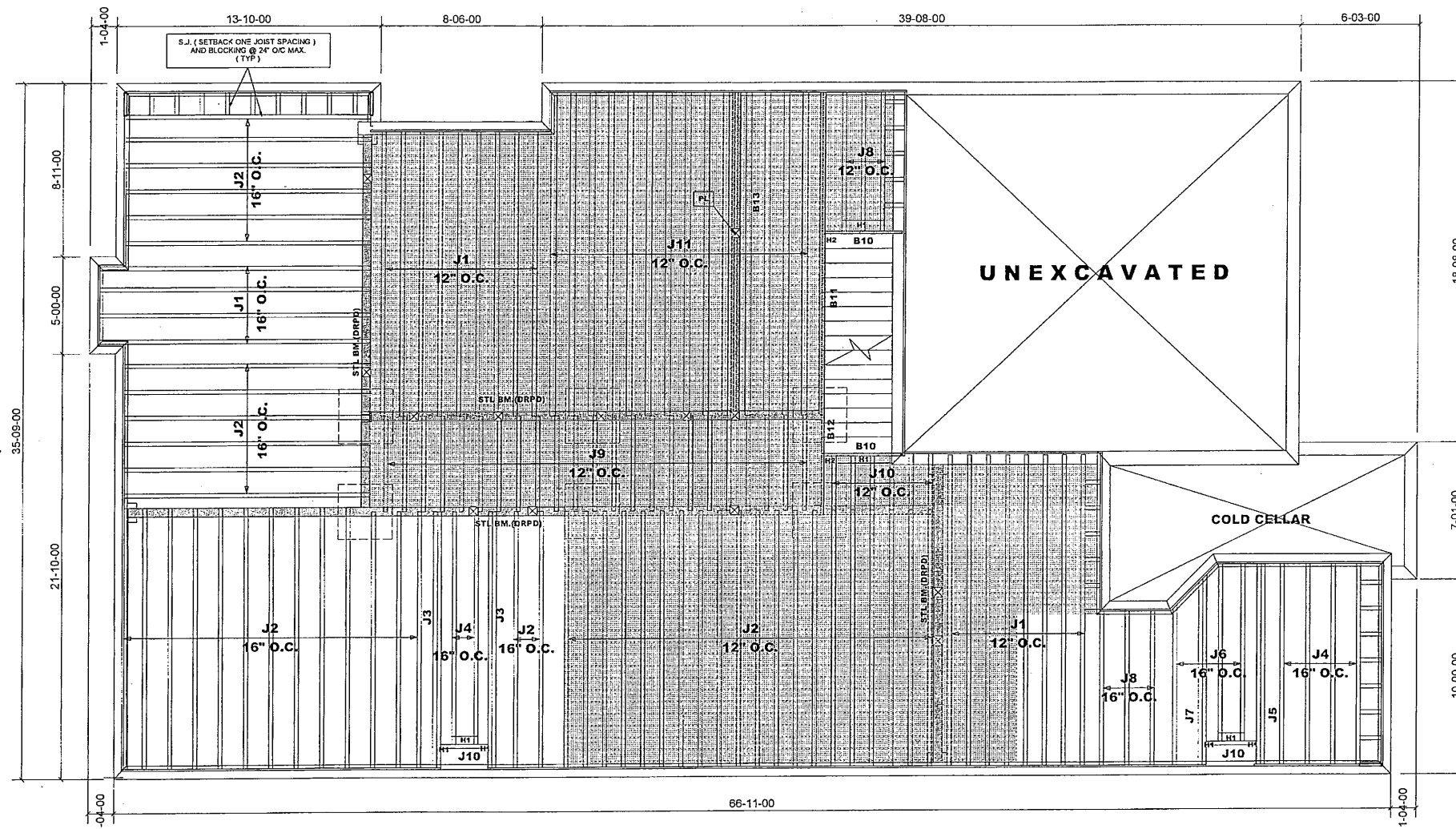
Designer: FC/SG

Sheet: 9 of 21

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

Site Copy



Products				
PlotID	Length	Product	Piles	Net Qty
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HANGER SCHEDULE.

H1 - IUS2.56/9.5 (FM)
H2 - HUS1.81/10 (FM)

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S42 - 1B (LOFT) ELEV. " B " W.O.B. COND.

FIRST FLOOR FRAMING

HATCH LEGEND	
	CERAMIC TILES

Do not scale - refer to architectural plans for dimensions

& w/upgraded rear

JT: 44997/94450

Builder: Bayview Wellington Homes

Location: Bradford

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Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
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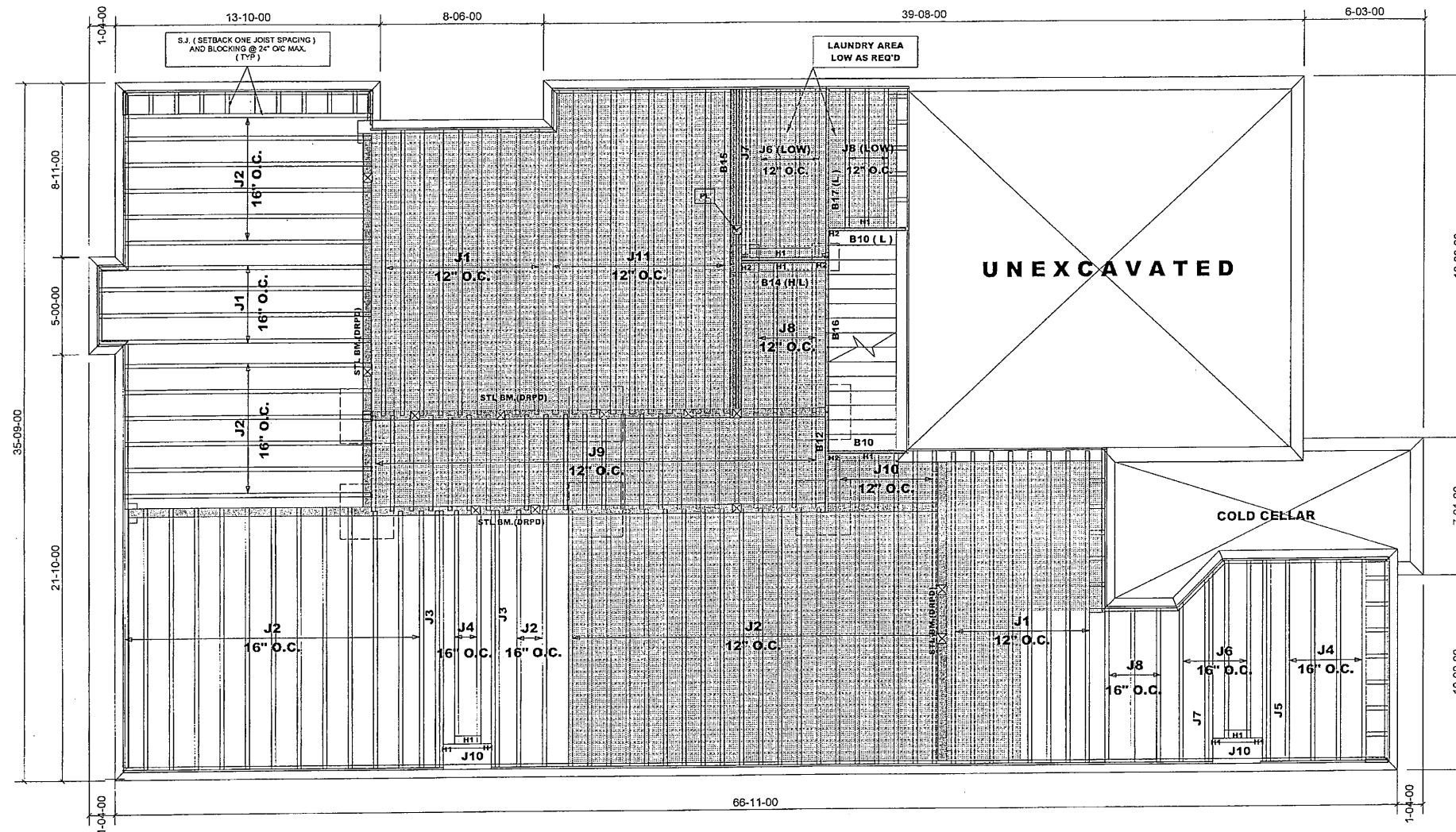
File: 287855(248697)

Project: Green Valley Estates East

Date: Sept 9, 2017

Sheet: 11 of 21

Site Copy



S42 - 1B (LOFT) ELEV. " B "
SUNKEN LAUNDRY &
W.O.B COND.

4 w/ upgraded rear

FIRST FLOOR FRAMING

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	CERAMIC TILES

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B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE:

H1 — IUS2.56/9.5 (FM)
H2 — HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
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JT: 44997/94450

Builder: Bayview Wellington Homes

Location: Bradford

Designer: FC/SG

Alpa Roof Trusses Inc.
Maple, Ontario

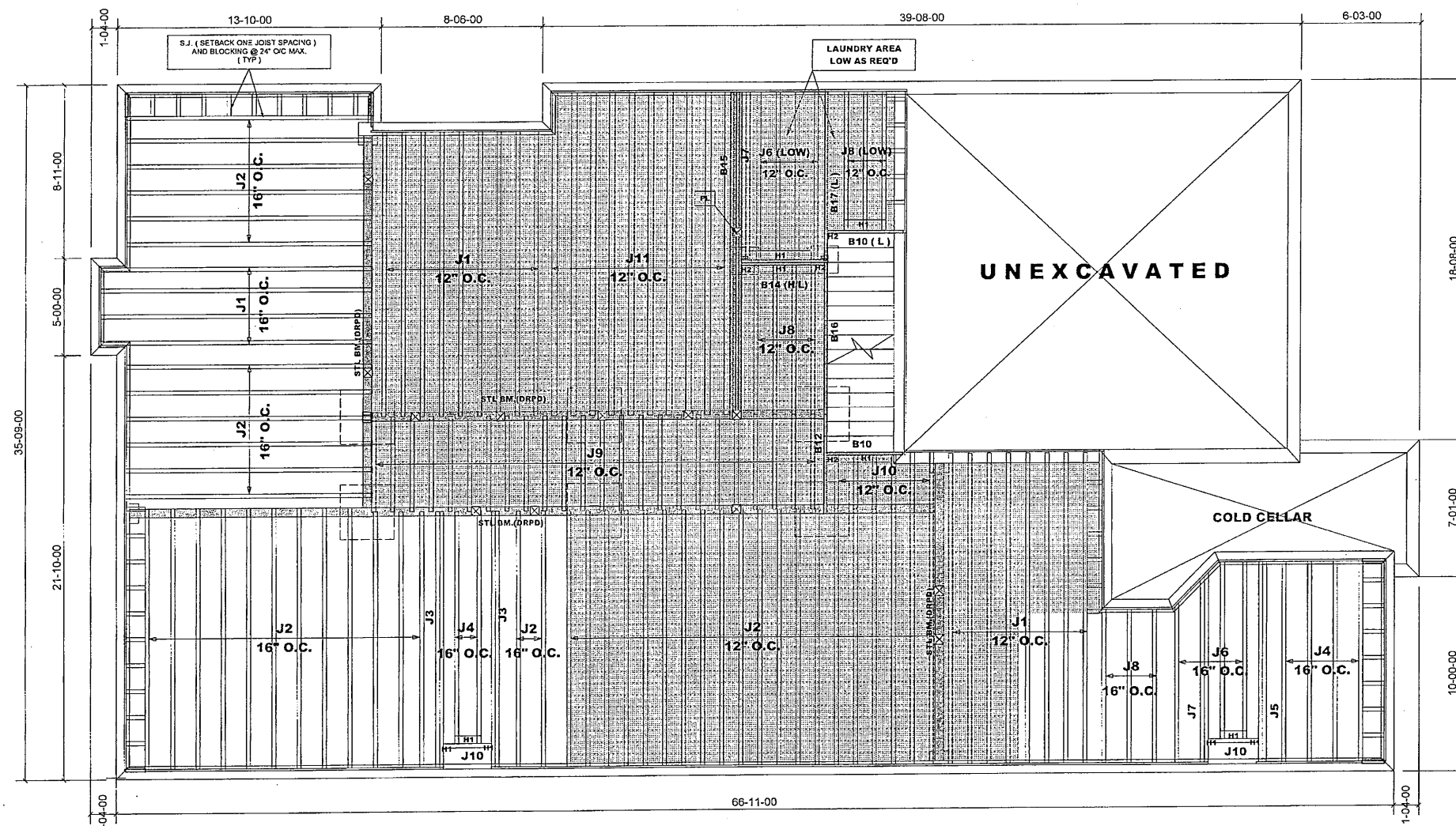
Salesperson: Mario.
Tamarack Lumber

File: 287855(248697)

Project: Green Valley Estates East

Date: Sept 9, 2017

Sheet: 13 of 21



S42 - 1B (LOFT) ELEV. " B "
SUNKEN LAUNDRY &
W.O.D. COND.

W/ upgraded rear

FIRST FLOOR FRAMING

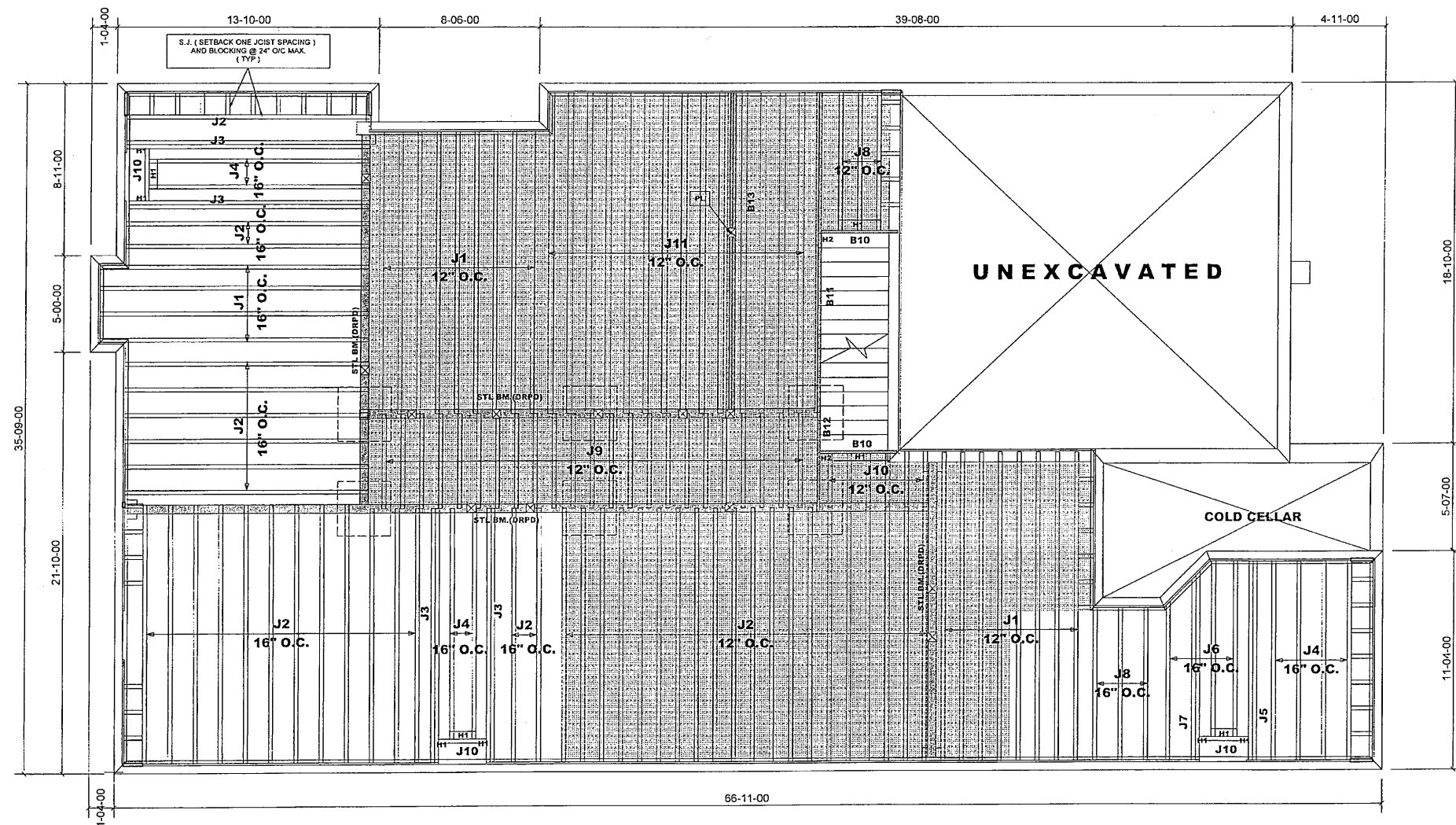
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HATCH LEGEND	
	CERAMIC TILES

Products				
PlotID	Length	Product	Plies	Net Qty
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J5	12-00-00	9 1/2" NI-40x	2	2
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J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	10
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B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE.
H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)
NOTE :
TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others
SUBFLOOR - 5/8" NAILED & GLUED
RIMBOARD
1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls.
Multiple squash blocks are required under concentrated loads.
Ceramic tile application as per O.B.C. 9.30.6



Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	43
J3	14-00-00	9 1/2" NI-40x	2	8
J4	12-00-00	9 1/2" NI-40x	1	8
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	6
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	9
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE:

H1 — IUS2.56/9.5 (FM)
H2 — HUS1.81/10 (FM)

NOTE:

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

**S42 - 1B (LOFT)
ELEV. " C "**

FIRST FLOOR FRAMING

HATCH LEGEND	
	CERAMIC TILES

Do not scale - refer to architectural plans for dimensions

EW/ upgraded rear

JT: 44997/94450

Builder: Bayview Wellington Homes

Location: Bradford

Designer: FC/SG

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

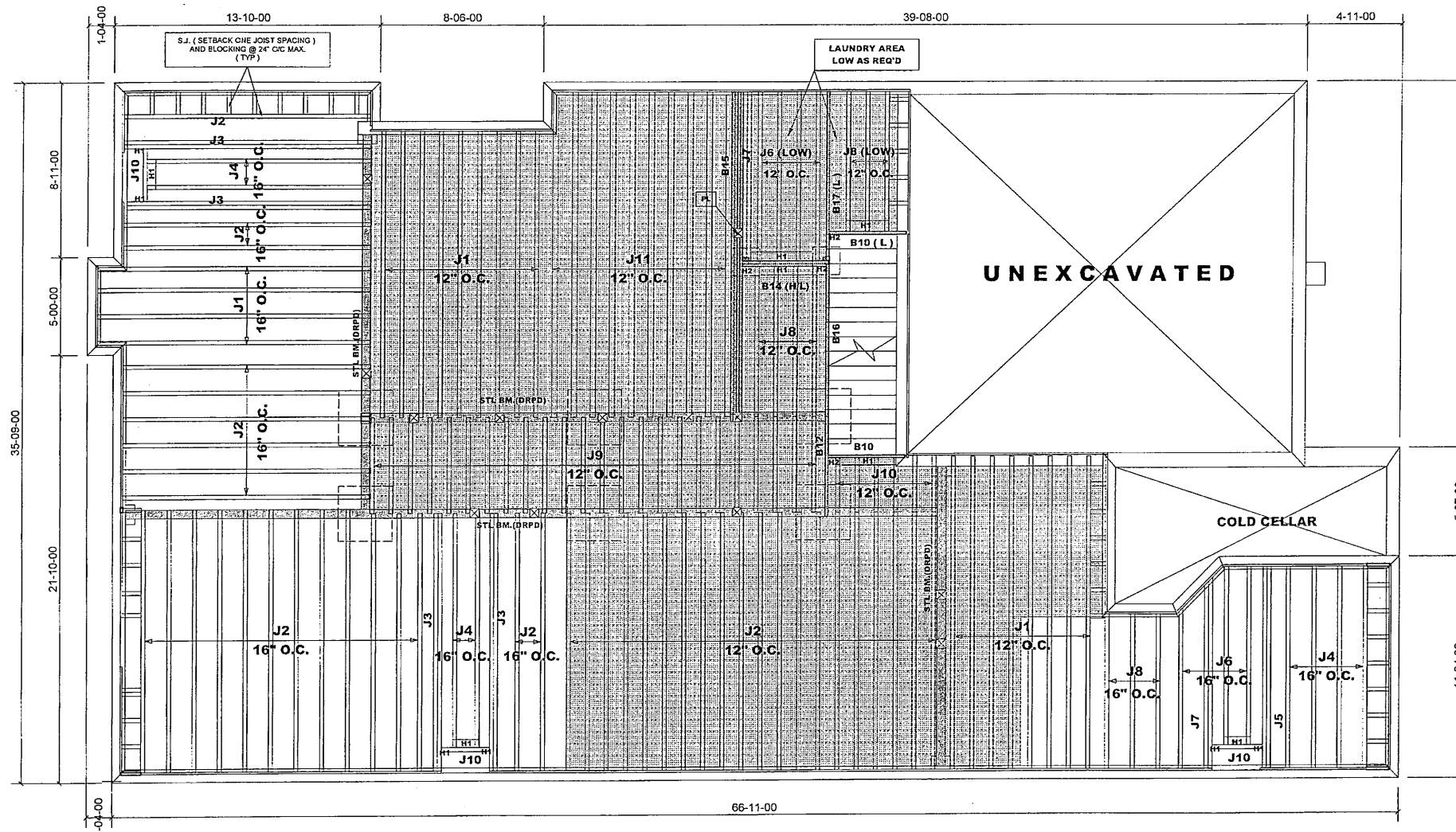
File: 287855(248697)

Project: Green Valley Estates East

Date: Sept. 8, 2017

Sheet: 16 of 21

Site Copy



Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	43
J3	14-00-00	9 1/2" NI-40x	2	8
J4	12-00-00	9 1/2" NI-40x	1	8
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	7
J7	10-00-00	9 1/2" NI-40x	2	4
J8	8-00-00	9 1/2" NI-40x	1	10
J9	6-00-00	9 1/2" NI-40x	1	24
J10	4-00-00	9 1/2" NI-40x	1	9
J11	18-00-00	9 1/2" NI-80	1	10
B15	18-00-00	VERSALAM-10 2.0E	4	4
B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE.

H1 ——— IUS2.56/9.5 (FM)

H2 ——— HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers

FM - Face Mount Hanger

APP - As Per Plan

BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

S42 - 1B (LOFT) ELEV. " C "

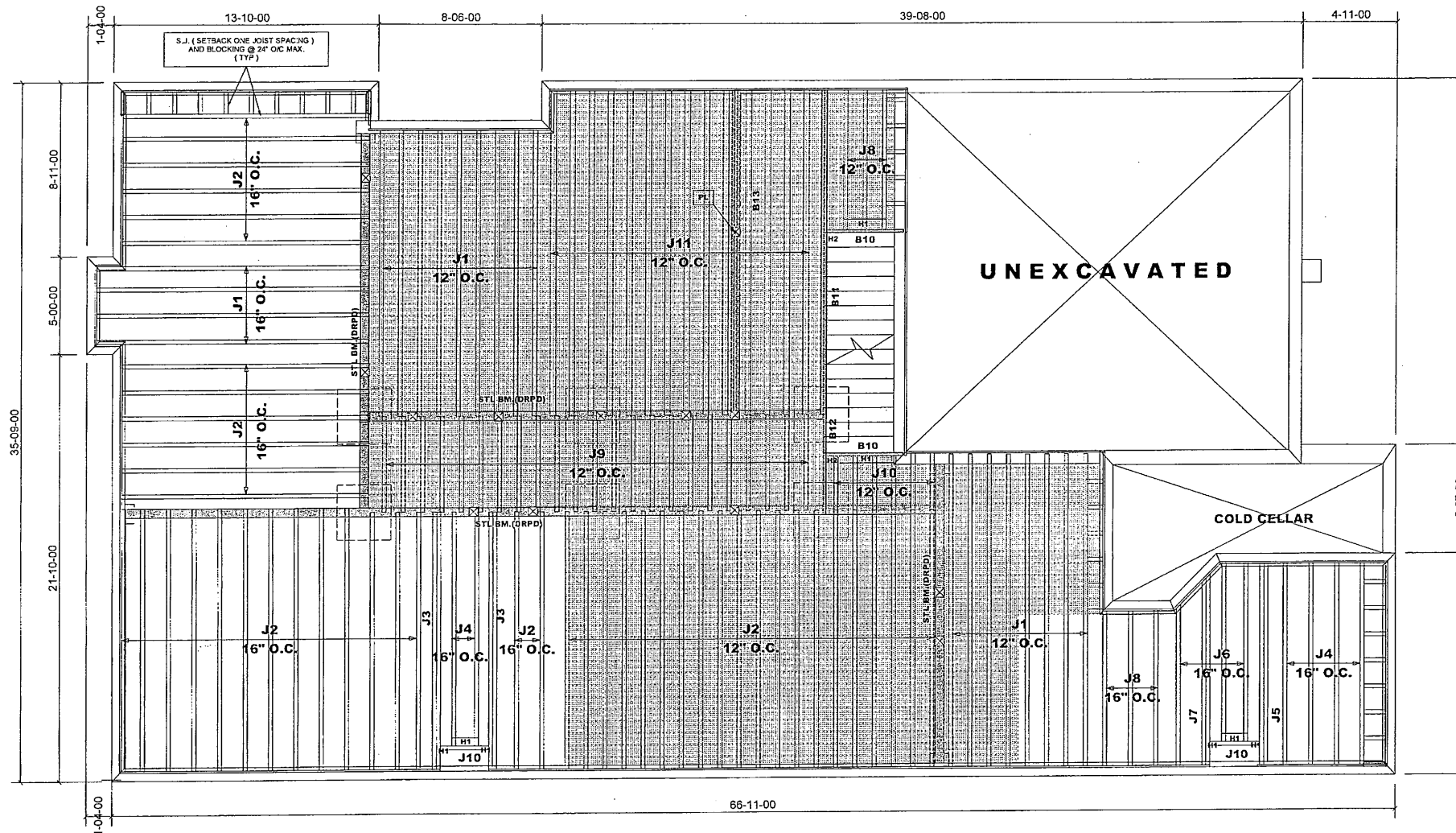
SUNKEN LAUNDRY COND.

9 Upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

HATCH LEGEND	
	CERAMIC TILES



S42 - 1B (LOFT) ELEV. " C "
W.O.B. COND.

Upgraded rear

FIRST FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions.

HATCH LEGEND
CERAMIC TILES

Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	47
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	6
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	6
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE.

H1 _____ IUS2.56/9.5 (FM)
H2 _____ HUS1.61/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

File: 287855(248697)

Builder: Bayview Wellington Homes

Project: Green Valley Estates East

Location: Bradford

Date: Sept 9, 2017

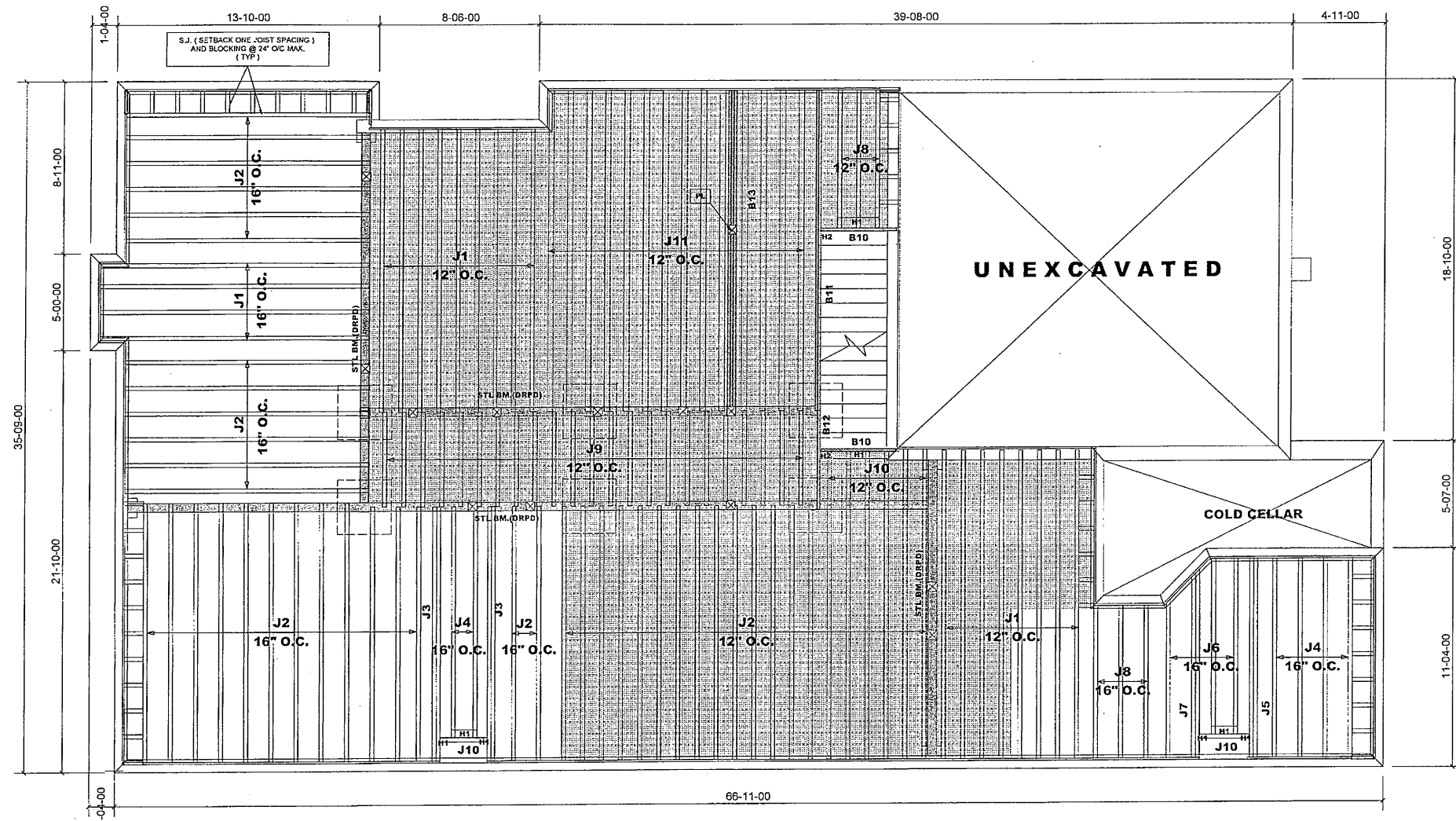
Designer: FC/SG

Sheet: 12 of 21

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

Site Copy



Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	46
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	6
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	3
J7	10-00-00	9 1/2" NI-40x	2	2
J8	8-00-00	9 1/2" NI-40x	1	6
J9	6-00-00	9 1/2" NI-40x	1	23
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	14
B11	18-00-00	VERSALAM-10 2.0E	2	2
B13	18-00-00	VERSALAM-10 2.0E	3	3
B12	6-00-00	VERSALAM-10 2.0E	1	1
B10	4-00-00	VERSALAM-10 2.0E	1	2

HANGER SCHEDULE.
H1 ——— IUS2.56/9.5 (FM)
H2 ——— HUS1.81/10 (FM)

NOTE :
TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED
RIMBOARD
1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

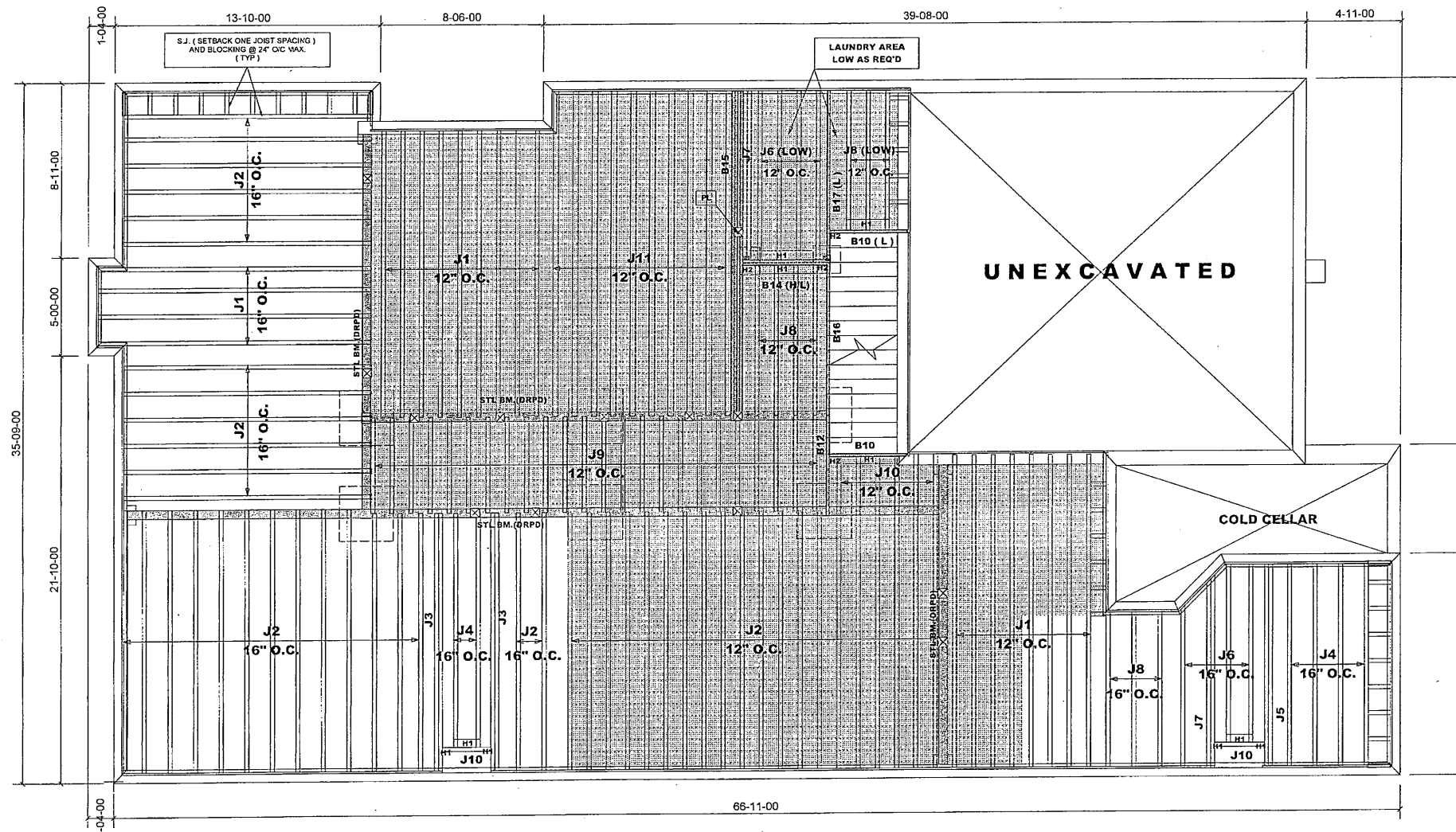
S42 - 1B (LOFT) ELEV. " C "
W.O.D. COND.

& upgraded rear

FIRST FLOOR FRAMING

HATCH LEGEND	
	CERAMIC TILES

Do not scale - refer to architectural plans for dimensions



S42 - 1B (LOFT) ELEV. " C "
SUNKEN LAUNDRY &
W.O.B COND.

& upgraded rear

FIRST FLOOR FRAMING

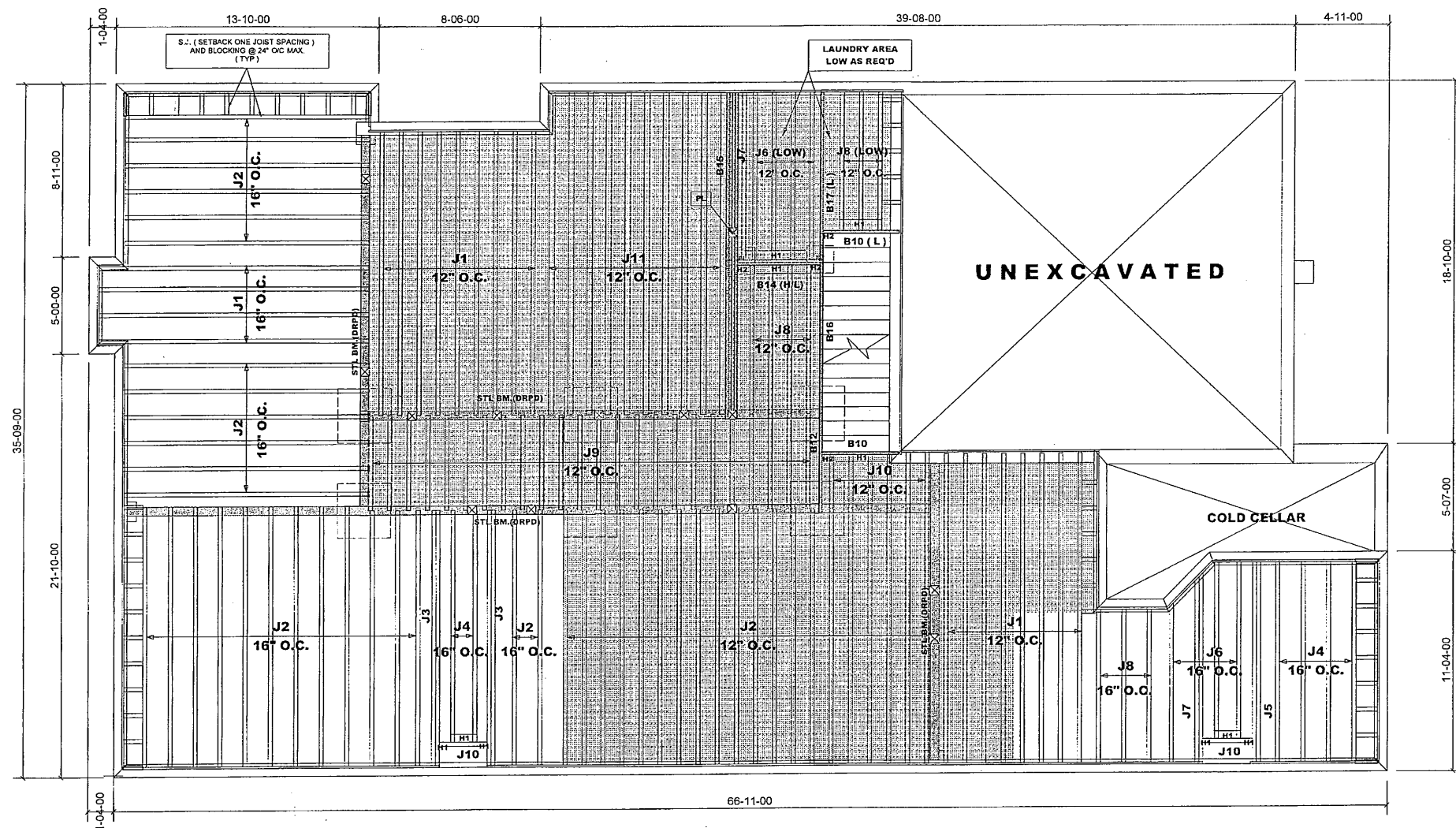
Do not scale - refer to architectural plans for dimensions

HATCH LEGEND	
	CERAMIC TILES

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	47
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	6
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	7
J7	10-00-00	9 1/2" NI-40x	2	4
J8	8-00-00	9 1/2" NI-40x	1	10
J9	6-00-00	9 1/2" NI-40x	1	24
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	10
B15	18-00-00	VERSALAM-10 2.0E	4	4
B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE.
H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)
NOTE :
TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others
SUBFLOOR - 5/8" NAILED & GLUED
RIMBOARD
1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls
Multiple squash blocks are required under concentrated loads.
Ceramic tile application as per O.B.C. 9.30.6



S42 - 1B (LOFT) ELEV. " C "
SUNKEN LAUNDRY &
W.O.D. COND.

FIRST FLOOR FRAMING

Do not scale - refer to architectural
 plans for dimensions

HATCH LEGEND
CERAMIC TILES

Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	21
J2	14-00-00	9 1/2" NI-40x	1	46
J3	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	6
J5	12-00-00	9 1/2" NI-40x	2	2
J6	10-00-00	9 1/2" NI-40x	1	7
J7	10-00-00	9 1/2" NI-40x	2	4
J8	8-00-00	9 1/2" NI-40x	1	10
J9	6-00-00	9 1/2" NI-40x	1	24
J10	4-00-00	9 1/2" NI-40x	1	8
J11	18-00-00	9 1/2" NI-80	1	10
B15	18-00-00	VERSALAM-10 2.0E	4	4
B16	10-00-00	VERSALAM-10 2.0E	1	1
B17 (L)	10-00-00	VERSALAM-10 2.0E	1	1
B12	6-00-00	VERSALAM-10 2.0E	1	1
B14 (H/L)	6-00-00	VERSALAM-10 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1
B10 (L)	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE.

H1 ----- IUS2.56/9.5 (FM)
 H2 ----- HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
 FM - Face Mount Hanger
 APP - As Per Plan
 SBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side
 of each joists under interior load bearing walls

Multiple squash blocks are required under
 concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

Builder: Bayview Wellington Homes

Location: Bradford

Designer: FC/SG

Alpa Roof Trusses Inc.
 Maple, Ontario

Salesperson: Mario.
 Tamarack Lumber

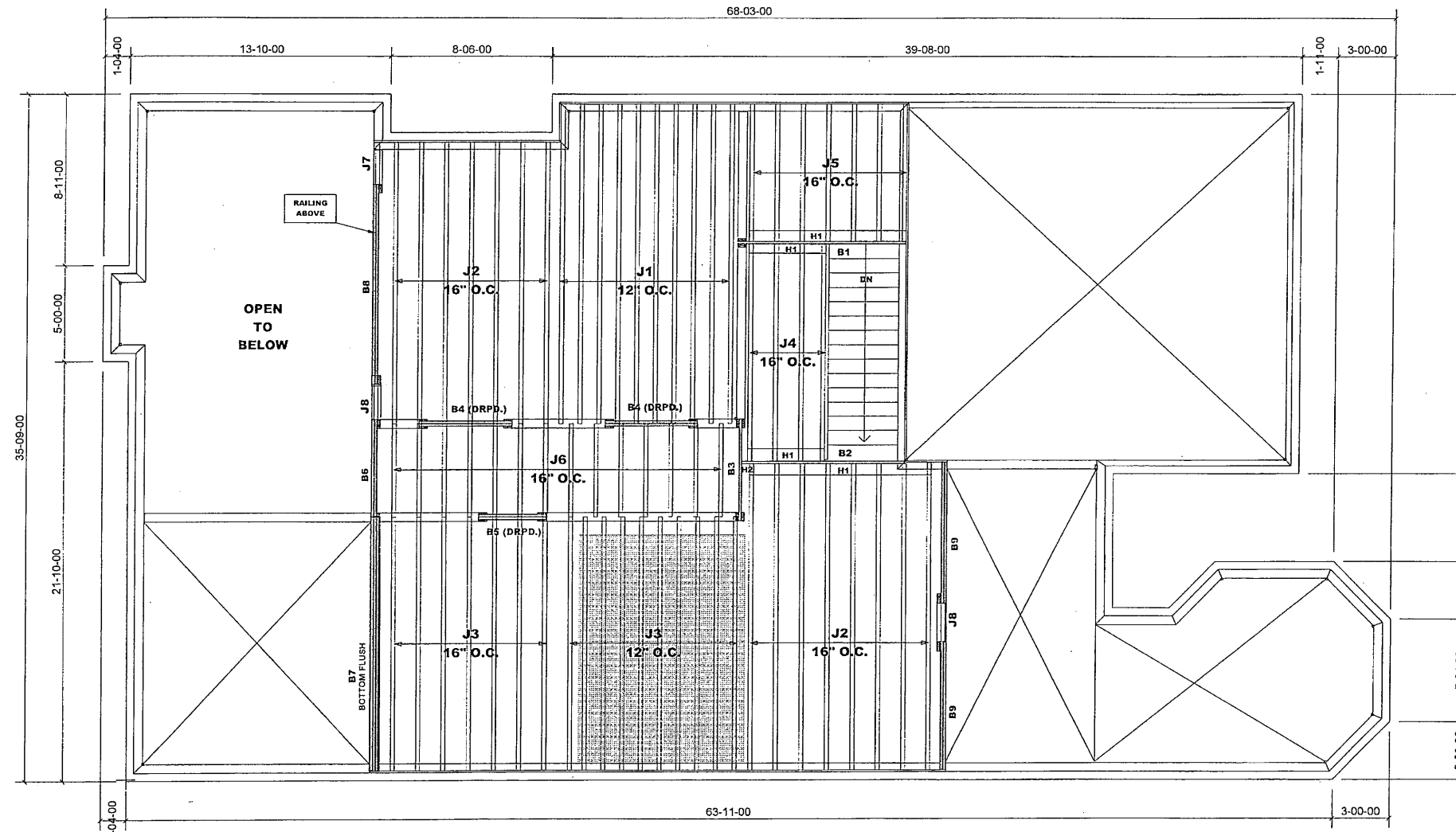
File: 287855(248697)

Project: Green Valley Estates East

Date: Setp. 8, 2017

Sheet: 2 of 21

Site Copy



Products				
PlotID	Length	Product	Piles	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	10
J2	16-00-00	9 1/2" NI-40x	1	15
J3	14-00-00	9 1/2" NI-40x	1	17
J4	12-00-00	9 1/2" NI-40x	1	4
J5	8-00-00	9 1/2" NI-40x	1	7
J6	6-00-00	9 1/2" NI-40x	1	14
J7	4-00-00	9 1/2" NI-40x	1	1
J8	2-00-00	9 1/2" NI-40x	1	2
B7	14-00-00	VERSALAM-12 2.0E	3	3
B8	12-00-00	VERSALAM-10 2.0E	2	2
B1	10-00-00	VERSALAM-10 2.0E	1	1
B2	10-00-00	VERSALAM-10 2.0E	1	1
B9	8-00-00	VERSALAM-10 2.0E	2	4
B3	6-00-00	VERSALAM-10 2.0E	1	1
B4 (DRPD.)	6-00-00	VERSALAM-10 2.0E	2	4
B6	6-00-00	VERSALAM-10 2.0E	2	2
B5 (DRPD.)	4-00-00	VERSALAM-10 2.0E	2	2

HANGER SCHEDULE.

H1 IUS2.56/9.5 (FM)
H2 HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

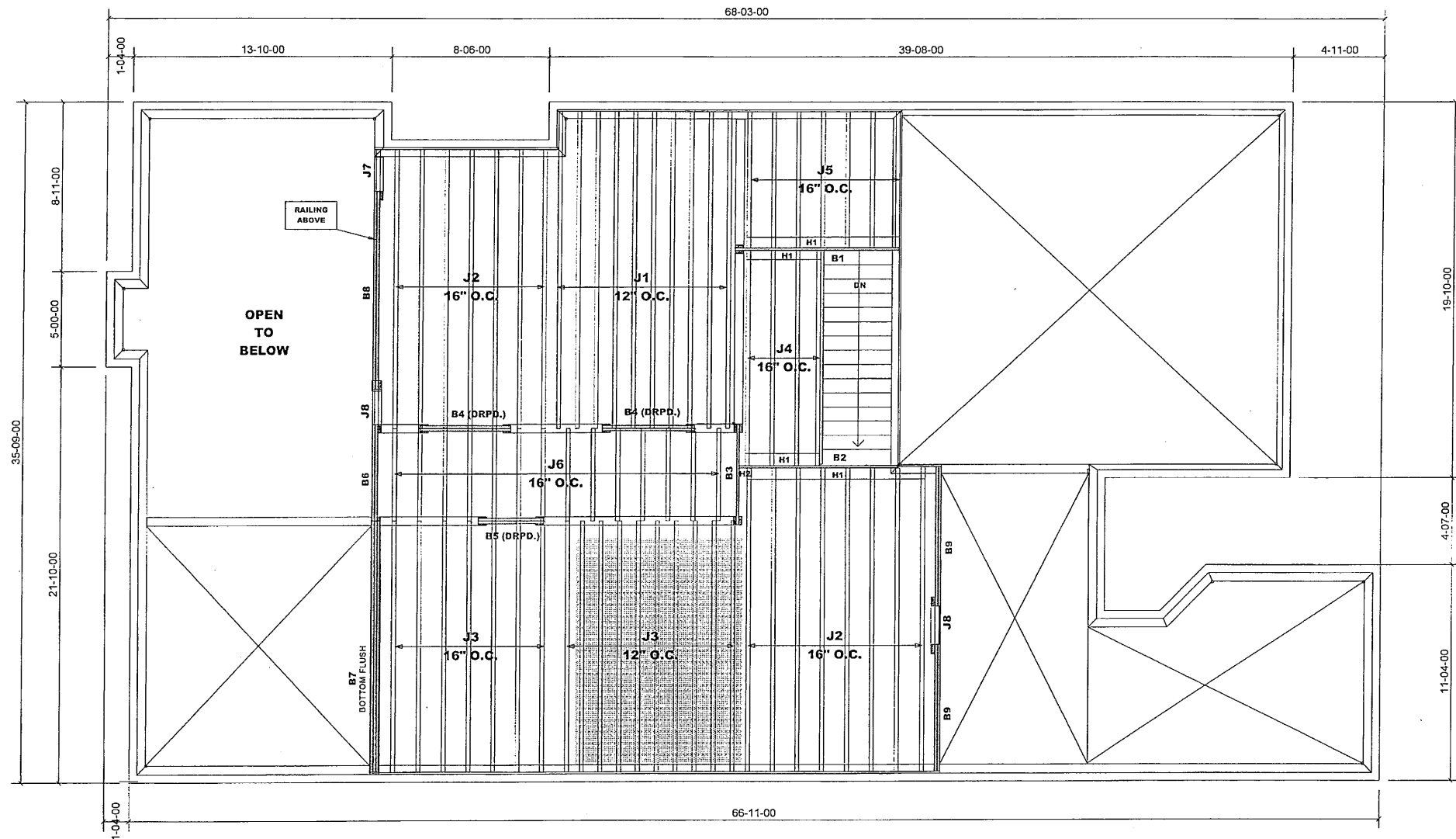
Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

HATCH LEGEND
CERAMIC TILES

Do not scale - refer to architectural plans for dimensions

T.1505004-T.1505020



S42 - 1B (LOFT)
ELEV. " B "

SECOND FLOOR FRAMING

HATCH LEGEND
CERAMIC TILES

Do not scale - refer to architectural
plans for dimensions

Products				
PlotID	Length	Product	Piles	Net Qty
J1	18'-00"-00	9 1/2" NI-40x	1	10
J2	16'-00"-00	9 1/2" NI-40x	1	15
J3	14'-00"-00	9 1/2" NI-40x	1	17
J4	12'-00"-00	9 1/2" NI-40x	1	4
J5	8'-00"-00	9 1/2" NI-40x	1	7
J6	6'-00"-00	9 1/2" NI-40x	1	14
J7	4'-00"-00	9 1/2" NI-40x	1	1
J8	2'-00"-00	9 1/2" NI-40x	1	2
B7	14'-00"-00	VERSALAM-12 2.0E	3	3
B8	12'-00"-00	VERSALAM-10 2.0E	2	2
B1	10'-00"-00	VERSALAM-10 2.0E	1	1
B2	10'-00"-00	VERSALAM-10 2.0E	1	1
B9	8'-00"-00	VERSALAM-10 2.0E	2	4
B3	6'-00"-00	VERSALAM-10 2.0E	1	1
B4 (DRPD.)	6'-00"-00	VERSALAM-10 2.0E	2	4
B6	6'-00"-00	VERSALAM-10 2.0E	2	2
B5 (DRPD.)	4'-00"-00	VERSALAM-10 2.0E	2	2

HANGER SCHEDULE

H1 ——— IUS2.56/9.5 (FM)
H2 ——— HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side
of each joists under interior load bearing walls
Multiple squash blocks are required under
concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

Builder: Bayview Wellington Homes

Location: Bradford

Designer: FC/SG

Alpa Roof Trusses Inc.
Maple, Ontario

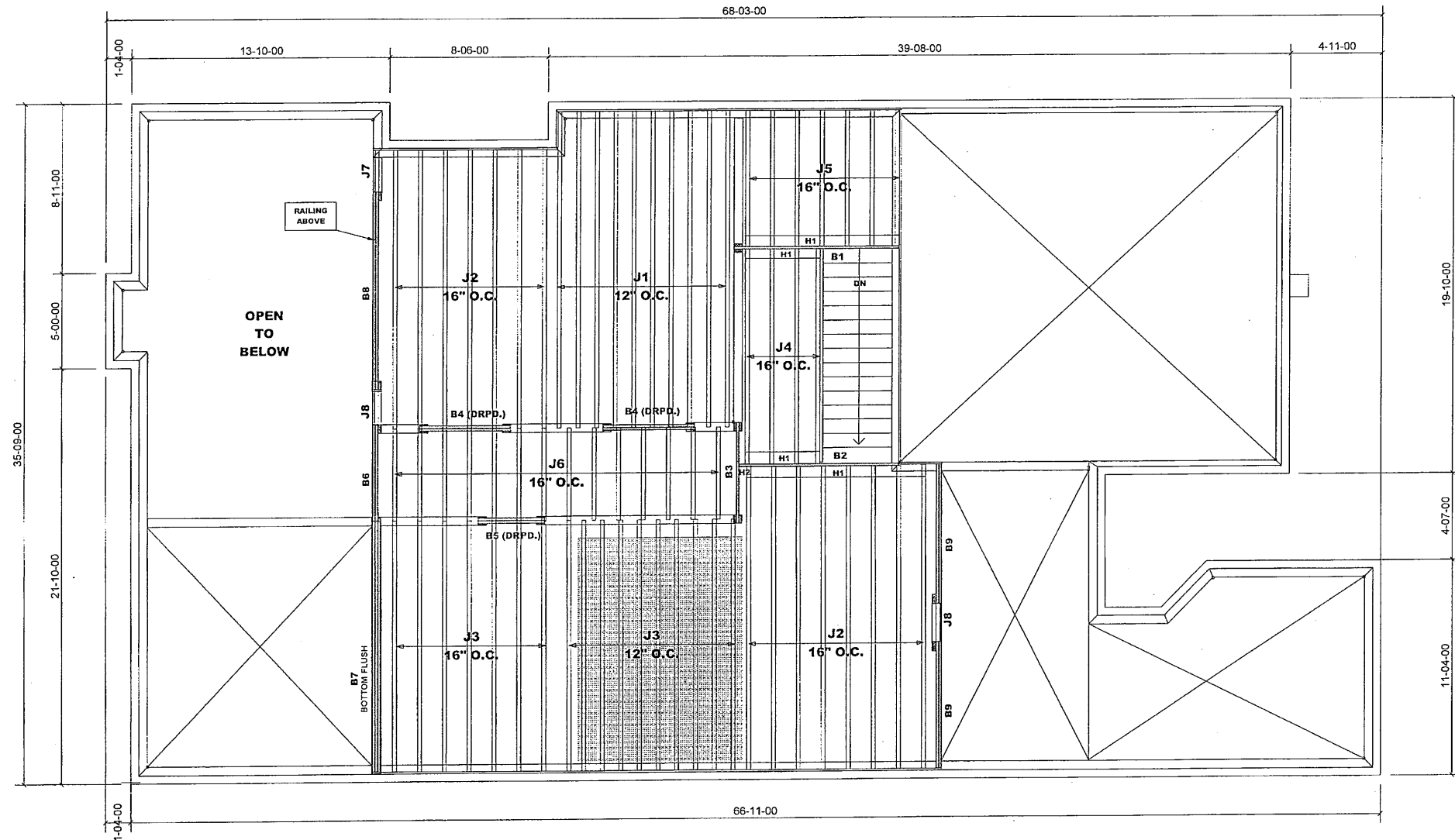
Salesperson: Mario.
Tamarack Lumber

File: 287855(248697)

Project: Green Valley Estates East

Date: Sept. 8, 2017

Sheet: 8 of 21



S42 - 1B (LOFT)
ELEV. " C "

SECOND FLOOR FRAMING

HATCH LEGEND	
	CERAMIC TILES

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	10
J2	16-00-00	9 1/2" NI-40x	1	15
J3	14-00-00	9 1/2" NI-40x	1	17
J4	12-00-00	9 1/2" NI-40x	1	4
J5	8-00-00	9 1/2" NI-40x	1	7
J6	6-00-00	9 1/2" NI-40x	1	14
J7	4-00-00	9 1/2" NI-40x	1	1
J8	2-00-00	9 1/2" NI-40x	1	2
B7	14-00-00	VERSALAM-12 2.0E	3	3
B8	12-00-00	VERSALAM-10 2.0E	2	2
B1	10-00-00	VERSALAM-10 2.0E	1	1
B2	10-00-00	VERSALAM-10 2.0E	1	1
B9	8-00-00	VERSALAM-10 2.0E	2	4
B3	6-00-00	VERSALAM-10 2.0E	1	1
B4 (DRPD.)	6-00-00	VERSALAM-10 2.0E	2	4
B6	6-00-00	VERSALAM-10 2.0E	2	2
B5 (DRPD.)	4-00-00	VERSALAM-10 2.0E	2	2

HANGER SCHEDULE.

H1 ----- IUS2.56/9.5 (FM)
H2 ----- HUS1.81/10 (FM)

NOTE :

TM - Top Mount Hangers
FM - Face Mount Hanger
APP - As Per Plan
BBO - Beam By Others

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

1 - 1/8" X 9-1/2" O.S.B.

1 - 2X6 SPF#2 squash block req'd on one side of each joists under interior load bearing walls

Multiple squash blocks are required under concentrated loads.

Ceramic tile application as per O.B.C. 9.30.6

JT: 44997/94450

Builder: Bayview Wellington Homes

Location: Bradford

Designer: FC/SG
Sheet: 15 of 21

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Mario.
Tamarack Lumber

File: 287855(248697)

Project: Green Valley Estates East

Date: Sept. 8, 2017

BC CALC® Design Report


Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code:

Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

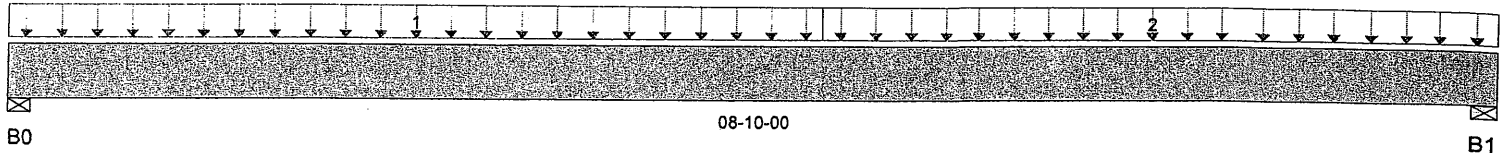
Description: Designs\B01

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 08-10-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,665 / 0	646 / 0		
B1, 3-1/2"	1,788 / 0	692 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	04-10-00	40	15			09-02-00
2	FLOOR/STAIRS	Unf. Area (lb/ft^2)	L	04-10-00	08-10-00	40	15			10-06-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	6,760 ft-lbs	12,704 ft-lbs	0.53	1	04-05-12
End Shear	2,643 lbs	5,785 lbs	0.46	1	07-09-00
Total Load Defl.	L/421 (0.239")	0.419"	0.57	4	04-05-01
Live Load Defl.	L/583 (0.172")	0.279"	0.62	5	04-05-01
Max Defl.	0.239"	1"	0.24	4	04-05-01
Span / Depth	10.6	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. BC CALC®, BC FRAMER®, AJST®, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Bearing Supports

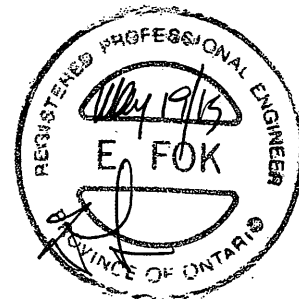
	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B0	Wall/Plate	3-1/2" x 1-3/4"	3,304 lbs	0.88	0.44	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 1-3/4"	3,546 lbs	0.94	0.47	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS



T-1508004

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

December-04-14

BC CALC® Design Report



Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code: Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

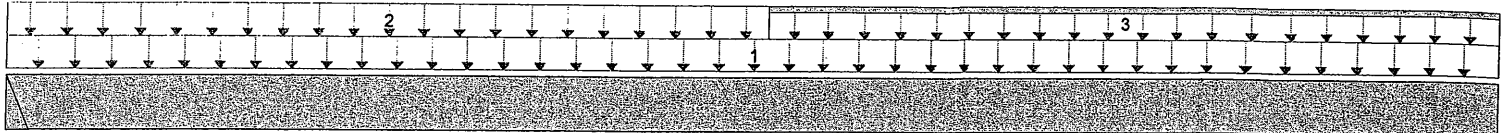
Description: Designs\B02

Specifier:

Designer: F.C.

Company: Alps Roof Trusses Inc.

Misc:



B0

08-06-00

B1

Total Horizontal Product Length = 08-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	2,095 / 0	863 / 0		
B1, 3-1/2"	1,608 / 0	816 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	08-06-00	40	15			08-00-00
2	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	04-04-00	40	15			05-08-00
3	WALL	Unf. Lin. (lb/ft)	L	04-04-00	08-06-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,460 ft-lbs	12,704 ft-lbs	0.59	1	03-11-01
End Shear	3,094 lbs	5,785 lbs	0.53	1	01-00-08
Total Load Defl.	L/397 (0.244")	0.404"	0.6	4	04-01-08
Live Load Defl.	L/576 (0.168")	0.269"	0.62	5	04-01-08
Max Defl.	0.244"	1"	0.24	4	04-01-08
Span / Depth	10.2	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Hanger	3" x 1-3/4"	4,221 lbs	0.65	0.66	HUS1.81/10
B1 Wall/Plate	3-1/2" x 1-3/4"	3,432 lbs	0.91	0.46	Spruce Pine Fir

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Hanger Manufacturer: Simpson Strong-Tie, Inc.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS



T-1505005

BC CALC® Design Report



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

December-04-14

Build 3272

Job Name:

38514

File Name: S42-1B

Description: Designs\B03

Address:

GREEN VALLEY ESTATES (S42-1B)

Specifier:

City, Province, Postal Code: Bradford, ON

Designer: F.C.

Customer:

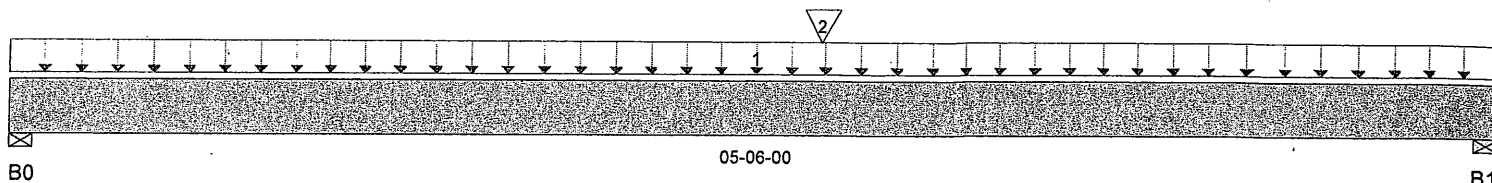
BAYVIEW WELLINGTON HOMES

Company: Alps Roof Trusses Inc.

Code reports:

CCMC 12472-R

Misc:



Total Horizontal Product Length = 05-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,090 / 0	457 / 0		
B1, 3-1/2"	1,299 / 0	543 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	05-06-00	40	15			01-04-00
2	PL B2	Conc. Pt. (lbs)	L	03-00-00	03-00-00	2,095	863			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,615 ft-lbs	12,704 ft-lbs	0.44	1	03-00-00
End Shear	2,506 lbs	5,785 lbs	0.43	1	04-05-00
Total Load Defl.	L/999 (0.058")	n/a	n/a	4	02-09-13
Live Load Defl.	L/999 (0.041")	n/a	n/a	5	02-09-13
Max Defl.	0.058"	n/a	n/a	4	02-09-13
Span / Depth	6.4	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. \n\nBC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Bearing Supports

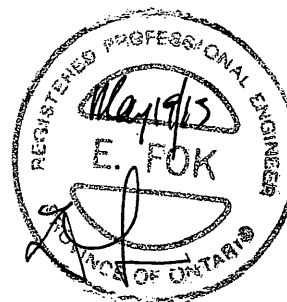
	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	2,205 lbs	0.59	0.3	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	2,626 lbs	0.7	0.35	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS



T-1505006

Site Copy



Build 3272

Job Name:

38514

File Name: S42-1B

Description: Designs\B04

Address:

GREEN VALLEY ESTATES (S42-1B)

Specifier:

City, Province, Postal Code: Bradford, ON

Designer: F.C.

Customer:

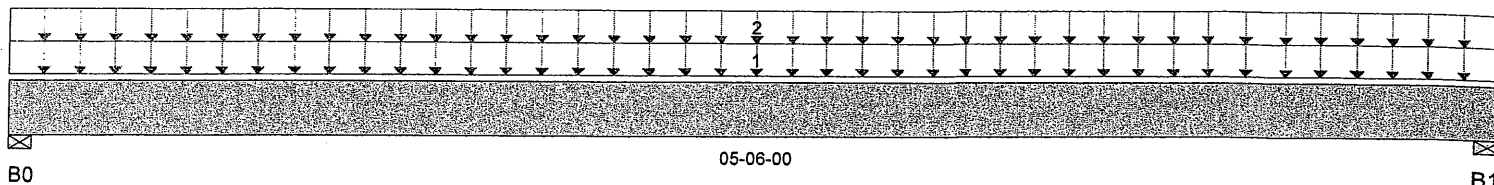
BAYVIEW WELLINGTON HOMES

Company: Alps Roof Trusses Inc.

Code reports:

CCMC 12472-R

Misc:



Total Horizontal Product Length = 05-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,192 / 0	473 / 0		
B1, 3-1/2"	1,192 / 0	473 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	05-06-00	40	15			08-04-00
2	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	05-06-00	40	15			02-06-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,749 ft-lbs	25,408 ft-lbs	0.11	1	02-09-00
End Shear	1,442 lbs	11,571 lbs	0.12	1	01-01-00
Total Load Defl.	L/999 (0.018")	n/a	n/a	4	02-09-00
Live Load Defl.	L/999 (0.013")	n/a	n/a	5	02-09-00
Max Defl.	0.018"	n/a	n/a	4	02-09-00
Span / Depth	6.4	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	2,379 lbs	0.32	0.16	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	2,379 lbs	0.32	0.16	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS (Top loaded)



T-1505007

Site Copy

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

December-04-14

BC CALC® Design Report



Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code:

Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

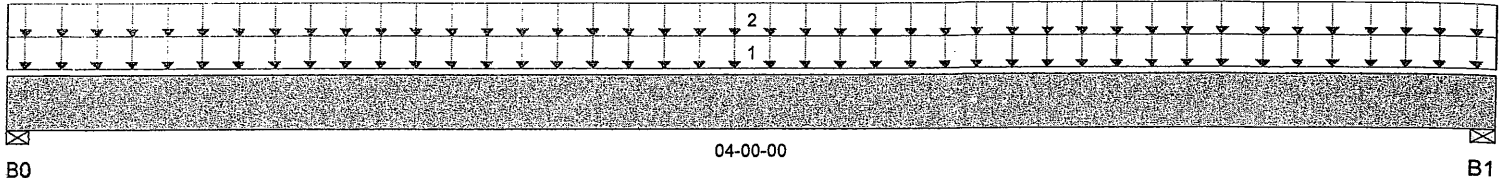
Description: Designs\B05

Specifier:

Designer: F.C.

Company: Alps Roof Trusses Inc.

Misc:

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	733 / 0	294 / 0		
B1, 3-1/2"	733 / 0	294 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	04-00-00	40	15			06-08-00
2	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	04-00-00	40	15			02-06-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,151 ft-lbs	25,408 ft-lbs	0.05	1	02-00-00
End Shear	673 lbs	11,571 lbs	0.06	1	01-01-00
Total Load Defl.	L/999 (0.004")	n/a	n/a	4	02-00-00
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	02-00-00
Max Defl.	0.004"	n/a	n/a	4	02-00-00
Span / Depth	4.5	n/a	n/a		00-00-00

Bearing Supports

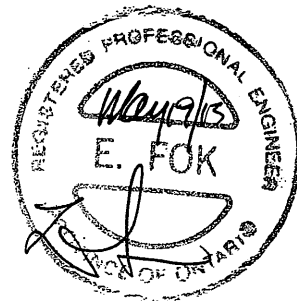
	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	1,468 lbs	0.19	0.1	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	1,468 lbs	0.19	0.1	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS



T-1505008

Site Copy

BC CALC® Design Report

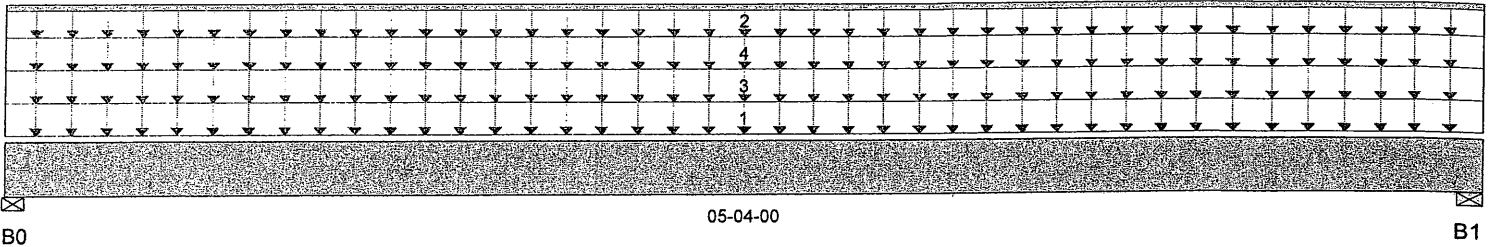


Dry | 1 span | No cantilevers | 0/12 slope (deg)

December-04-14

Build 3272
 Job Name: 38514
 Address: GREEN VALLEY ESTATES (S42-1B)
 City, Province, Postal Code: Bradford, ON
 Customer: BAYVIEW WELLINGTON HOMES
 Code reports: CCMC 12472-R

File Name: S42-1B
 Description: Designs\B06
 Specifier:
 Designer: F.C.
 Company: Alps Roof Trusses Inc.
 Misc:



Total Horizontal Product Length = 05-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3"	631 / 0	720 / 0	1,681 / 0	
B1, 3-1/2"	641 / 0	731 / 0	1,707 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	05-04-00	40	15			00-08-00
2	WALL	Unf. Lin. (lb/ft)	L	00-00-00	05-04-00		60			n/a
3	ROOF	Unf. Area (lb/ft^2)	L	00-00-00	05-04-00	11	10	33		15-03-00
4	ROOF	Unf. Area (lb/ft^2)	L	00-00-00	05-04-00	11	10	33		04-00-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,267 ft-lbs	25,408 ft-lbs	0.17	5	02-08-00
End Shear	2,265 lbs	11,571 lbs	0.2	5	01-00-08
Total Load Defl.	L/999 (0.025")	n/a	n/a	13	02-08-00
Live Load Defl.	L/999 (0.018")	n/a	n/a	17	02-08-00
Max Defl.	0.025"	n/a	n/a	13	02-08-00
Span / Depth	6.2	n/a	n/a		00-00-00

Bearing Supports

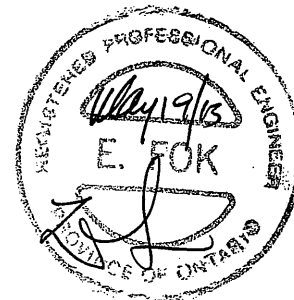
	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3" x 3-1/2"	3,737 lbs	0.58	0.29	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	3,795 lbs	0.5	0.25	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS (TOP LOADED)



T-1505009

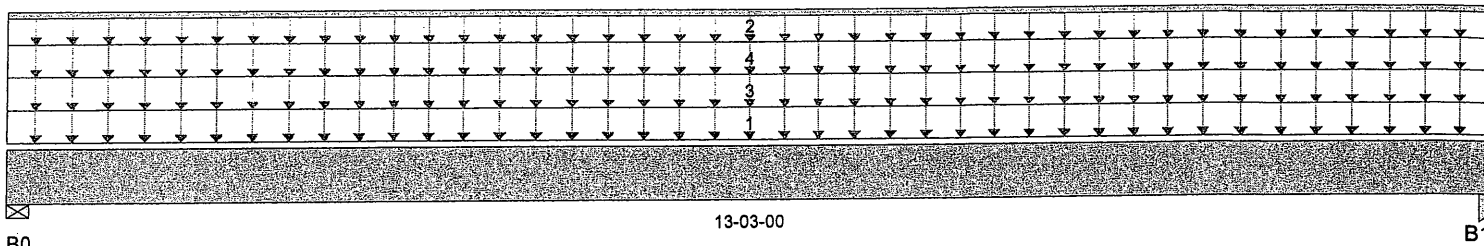
Site Copy

BC CALC® Design Report



Build 3272
 Job Name: 38514
 Address: GREEN VALLEY ESTATES (S42-1B)
 City, Province, Postal Code: Bradford, ON
 Customer: BAYVIEW WELLINGTON HOMES
 Code reports: CCMC 12472-R

File Name: S42-1B
 Description: Designs\B07
 Specifier:
 Designer: F.C.
 Company: Alps Roof Trusses Inc.
 Misc:



Total Horizontal Product Length = 13-03-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,749 / 0	2,014 / 0	4,715 / 0	
B1, 3"	1,738 / 0	2,001 / 0	4,686 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	13-03-00	40	15			00-08-00
2	WALL	Unf. Lin. (lb/ft)	L	00-00-00	13-03-00		60			n/a
3	ROOF	Unf. Area (lb/ft^2)	L	00-00-00	13-03-00	11	10	33		15-03-00
4	ROOF	Unf. Area (lb/ft^2)	L	00-00-00	13-03-00	11	10	33		06-03-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	32,417 ft-lbs	60,415 ft-lbs	0.54	5	06-07-08
End Shear	8,447 lbs	21,696 lbs	0.39	5	01-03-06
Total Load Defl.	L/345 (0.447")	0.642"	0.7	13	06-07-08
Live Load Defl.	L/480 (0.321")	0.428"	0.75	17	06-07-08
Max Defl.	0.447"	1"	0.45	13	06-07-08
Span / Depth	13	n/a	n/a		00-00-00

Bearing Supports

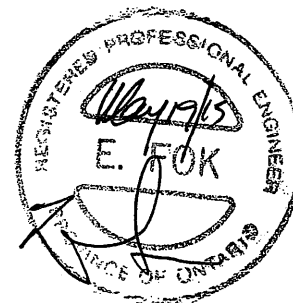
			Demand/ Resistance Support	Demand/ Resistance Member	Material
Bearing Supports	Dim. (L x W)	Demand			
B0	Wall/Plate	3-1/2" x 5-1/4"	10,465 lbs	0.93	0.47
B1	Post	3" x 3-1/2"	10,399 lbs	0.47	0.81
					Spruce Pine Fir
					Douglas Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS (TOP LOADS)



T-1505010



Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code:Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

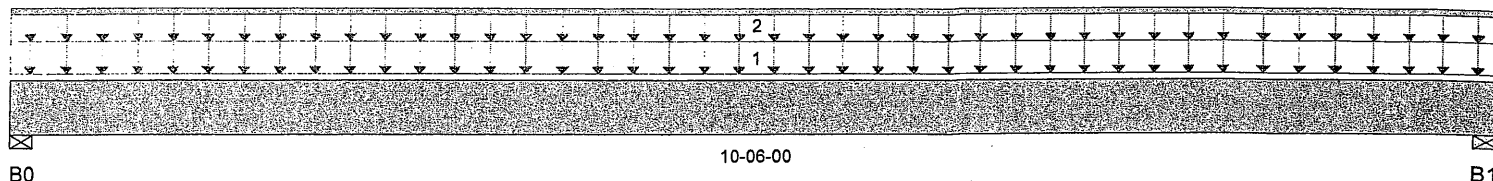
Description: Designs\B08

Specifier:

Designer: F.C.

Company: Alps Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 10-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	140 / 0	418 / 0		
B1, 3-1/2"	140 / 0	418 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	10-06-00	40	15			00-08-00
2	WALL	Unf. Lin. (lb/ft)	L	00-00-00	10-06-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,405 ft-lbs	16,515 ft-lbs	0.09	0	05-03-00
End Shear	465 lbs	7,521 lbs	0.06	0	01-01-00
Total Load Defl.	L/999 (0.049")	n/a	n/a	4	05-03-00
Live Load Defl.	L/999 (0.012")	n/a	n/a	5	05-03-00
Max Defl.	0.049"	n/a	n/a	4	05-03-00
Span / Depth	12.7	n/a	n/a		00-00-00

Bearing Supports

B0	Wall/Plate	3-1/2" x 3-1/2"	585 lbs	0.12	0.06	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 3-1/2"	585 lbs	0.12	0.06	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS



T-1505011

Site Copy

BC CALC® Design Report



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

December-04-14

Build 3272

Job Name:

38514

File Name: S42-1B

Description: Designs\B09

Address:

GREEN VALLEY ESTATES (S42-1B)

Specifier:

City, Province, Postal Code: Bradford, ON

Designer: F.C.

Customer:

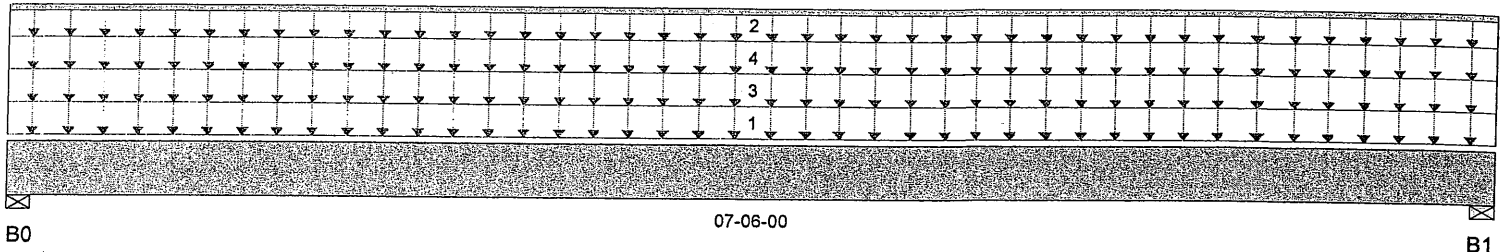
BAYVIEW WELLINGTON HOMES

Company: Alps Roof Trusses Inc.

Code reports:

CCMC 12472-R

Misc:



Total Horizontal Product Length = 07-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	901 / 0	1,027 / 0	2,403 / 0	
B1, 3-1/2"	901 / 0	1,027 / 0	2,403 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	07-06-00	40	15			00-08-00
2	WALL	Unf. Lin. (lb/ft)	L	00-00-00	07-06-00		60			n/a
3	ROOF	Unf. Area (lb/ft^2)	L	00-00-00	07-06-00	11	10	33		04-02-00
4	ROOF	Unf. Area (lb/ft^2)	L	00-00-00	07-06-00	11	10	33		15-03-00

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	8,823 ft-lbs	25,408 ft-lbs	0.35	5	03-09-00
End Shear	3,796 lbs	11,571 lbs	0.33	5	01-01-00
Total Load Defl.	L/999 (0.107")	n/a	n/a	13	03-09-00
Live Load Defl.	L/999 (0.077")	n/a	n/a	17	03-09-00
Max Defl.	0.107"	n/a	n/a	13	03-09-00
Span / Depth	8.9	n/a	n/a		00-00-00

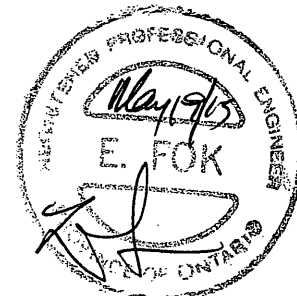
Bearing Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	5,338 lbs	0.71	0.36	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	5,338 lbs	0.71	0.36	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum total load deflection criteria.
Calculations assume Member is Fully Braced.
Resistance Factor phi has been applied to all presented results per CSA 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
@ 12" O.C., STAGGERED IN TWO ROWS (TOP WRDEN)



T-1505012

Site Copy

BC CALC® Design Report



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

December-04-14

Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code:

Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

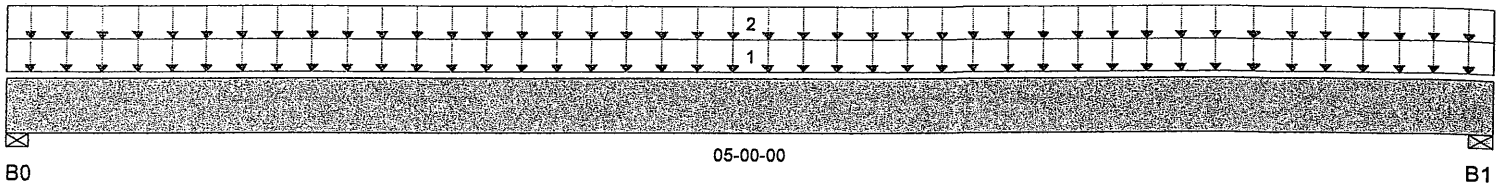
Description: Designs\B10

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 05-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	967 / 0	420 / 0		
B1, 3-1/2"	967 / 0	420 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	05-00-00	40	20			03-08-00
2	STAIRS	Unf. Area (lb/ft^2)	L	00-00-00	05-00-00	40	15			06-00-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,037 ft-lbs	12,704 ft-lbs	0.16	1	02-06-00
End Shear	1,119 lbs	5,785 lbs	0.19	1	01-01-00
Total Load Defl.	L/999 (0.021")	n/a	n/a	4	02-06-00
Live Load Defl.	L/999 (0.015")	n/a	n/a	5	02-06-00
Max Defl.	0.021"	n/a	n/a	4	02-06-00
Span / Depth	5.7	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. \n\nBC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	1,975 lbs	0.52	0.26	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	1,975 lbs	0.52	0.26	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS





Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code:

Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

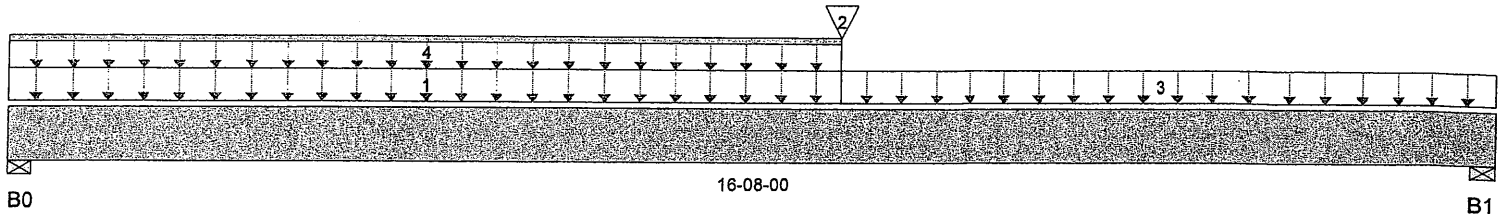
Description: Designs\B11

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 16-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	622 / 0	770 / 0		
B1, 3-1/2"	825 / 0	611 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	09-04-00	40	20			00-06-00
2	PL B10	Conc. Pt. (lbs)	L	09-04-00	09-04-00	967	420			n/a
3	FLOOR	Unf. Area (lb/ft^2)	L	09-04-00	16-08-00	40	20			01-00-00
4	WALL	Unf. Lin. (lb/ft)	L	00-00-00	09-04-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	11,611 ft-lbs	25,408 ft-lbs	0.46	1	09-04-00
End Shear	1,896 lbs	11,571 lbs	0.16	1	15-07-00
Total Load Defl.	L/283 (0.688")	0.81"	0.85	4	08-06-11
Live Load Defl.	L/515 (0.378")	0.54"	0.7	5	08-06-11
Max Defl.	0.688"	1"	0.69	4	08-06-11
Span / Depth	20.5	n/a	n/a		00-00-00

Bearing Supports

		Dim. (L x W)	Demand	Support	Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	1,895 lbs	0.25	0.13	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 3-1/2"	2,001 lbs	0.27	0.13	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ (2) O.C., STAGGERED IN TWO ROWS



T-1505014

Site Copy

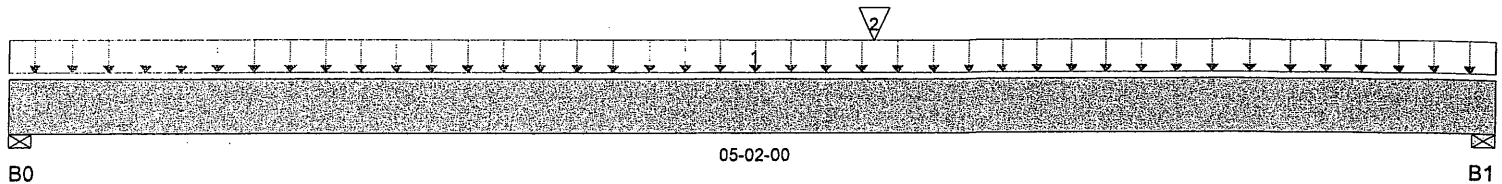
BC CALC® Design Report


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

December-04-14

Build 3272
 Job Name: 38514
 Address: GREEN VALLEY ESTATES (S42-1B)
 City, Province, Postal Code: Bradford, ON
 Customer: BAYVIEW WELLINGTON HOMES
 Code reports: CCMC 12472-R

File Name: S42-1B
 Description: Designs\B12
 Specifier:
 Designer: F.C.
 Company: Alpa Roof Trusses Inc.
 Misc:



Total Horizontal Product Length = 05-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	535 / 0	237 / 0		
B1, 3-1/2"	707 / 0	311 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	05-02-00	40	15			01-04-00
2	PL B10	Conc. Pt. (lbs)	L	03-00-00	03-00-00	967	420			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,549 ft-lbs	12,704 ft-lbs	0.2	1	03-00-00
End Shear	1,330 lbs	5,785 lbs	0.23	1	04-01-00
Total Load Defl.	L/999 (0.023")	n/a	n/a	4	02-08-06
Live Load Defl.	L/999 (0.016")	n/a	n/a	5	02-08-06
Max Defl.	0.023"	n/a	n/a	4	02-08-06
Span / Depth	5.9	n/a	n/a		00-00-00

Bearing Supports

Loading Supports		Dim. (L x W)	Demand	Support	Member	Material
B0	Wall/Plate	3-1/2" x 1-3/4"	1,099 lbs	0.29	0.15	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 1-3/4"	1,450 lbs	0.38	0.19	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



C-1505015

Site Copy

BC CALC® Design Report

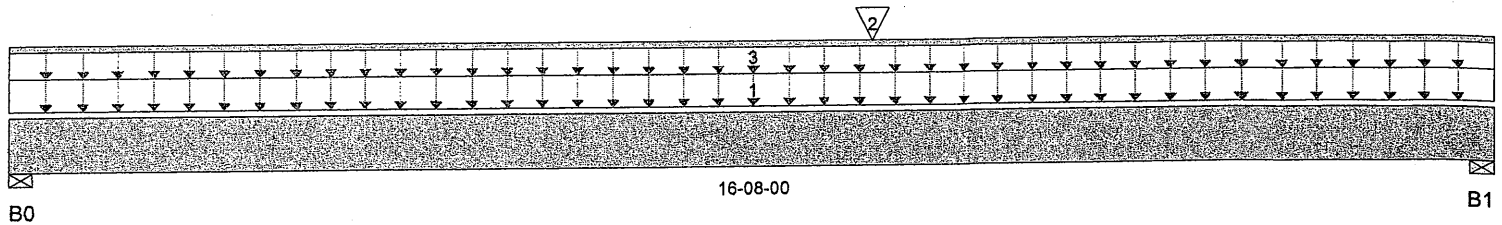


Dry | 1 span | No cantilevers | 0/12 slope (deg)

December-04-14

Build 3272
Job Name: 38514
Address: GREEN VALLEY ESTATES (S42-1B)
City, Province, Postal Code: Bradford, ON
Customer: BAYVIEW WELLINGTON HOMES
Code reports: CCMC 12472-R

File Name: S42-1B
Description: Designs\B13
Specifier:
Designer: F.C.
Company: Alpa Roof Trusses Inc.
Misc:



Total Horizontal Product Length = 16-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,029 / 0	1,057 / 0		
B1, 3-1/2"	1,303 / 0	1,163 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	16-08-00	40	20			01-00-00
2	PL B1	Conc. Pt. (lbs)	L	09-08-00	09-08-00	1,665	646			n/a
3	WALL	Unf. Lin. (lb/ft)	L	00-00-00	16-08-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	18,718 ft-lbs	39,636 ft-lbs	0.47	1	09-08-00
End Shear	3,216 lbs	17,356 lbs	0.19	1	15-07-00
Total Load Defl.	L/265 (0.733")	0.81"	0.9	4	08-07-02
Live Load Defl.	L/474 (0.411")	0.54"	0.76	5	08-07-02
Max Defl.	0.733"	1"	0.73	4	08-07-02
Span / Depth	20.5	n/a	n/a		00-00-00

Bearing Supports

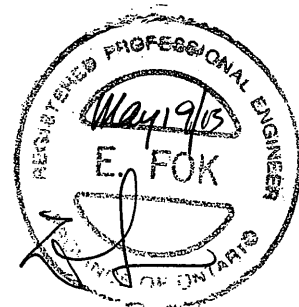
	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0	3-1/2" x 5-1/4"	2,864 lbs	0.25	0.13	Spruce Pine Fir
B1	3-1/2" x 5-1/4"	3,408 lbs	0.3	0.15	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum total load deflection criteria.
Calculations assume Member is Fully Braced.
Resistance Factor phi has been applied to all presented results per CSA 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
@ (Z') O.C., STAGGERED IN TWO ROWS



BC CALC® Design Report


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

December-04-14

Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code:

Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

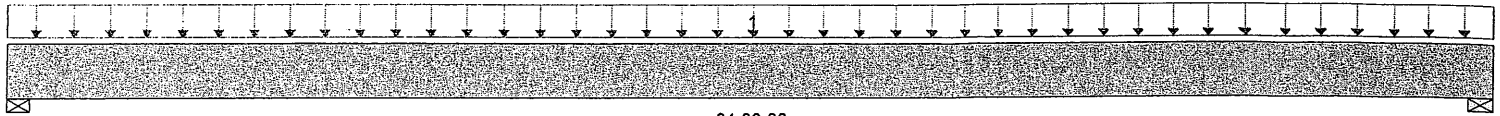
Description: Designs\B14

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



B0

04-06-00

B1

Total Horizontal Product Length = 04-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	405 / 0	213 / 0		
B1, 3-1/2"	405 / 0	213 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	04-06-00	40	20			04-06-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	793 ft-lbs	12,704 ft-lbs	0.06	1	02-03-00
End Shear	453 lbs	5,785 lbs	0.08	1	01-01-00
Total Load Defl.	L/999 (0.007")	n/a	n/a	4	02-03-00
Live Load Defl.	L/999 (0.004")	n/a	n/a	5	02-03-00
Max Defl.	0.007"	n/a	n/a	4	02-03-00
Span / Depth	5.1	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	874 lbs	0.23	0.12	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	874 lbs	0.23	0.12	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS



BC CALC® Design Report



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

December-04-14

Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code: Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

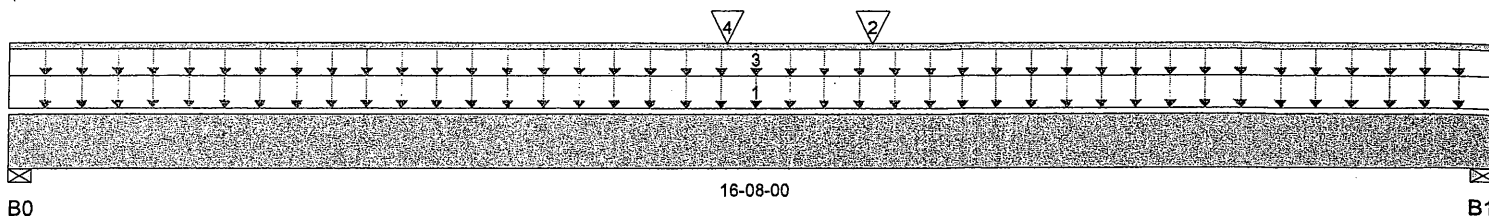
Description: Designs\B15

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 16-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,240 / 0	1,208 / 0		
B1, 3-1/2"	1,497 / 0	1,305 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	16-08-00	40	20			01-00-00
2	PL B1	Conc. Pt. (lbs)	L	09-08-00	09-08-00	1,665	646			n/a
3	WALL	Unf. Lin. (lb/ft)	L	00-00-00	16-08-00		60			n/a
4	PL B14	Conc. Pt. (lbs)	L	08-00-00	08-00-00	405	213			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	21,746 ft-lbs	52,848 ft-lbs	0.41	1	09-08-00
End Shear	3,678 lbs	23,142 lbs	0.16	1	15-07-00
Total Load Defl.	L/299 (0.652")	0.81"	0.8	4	08-07-08
Live Load Defl.	L/526 (0.37")	0.54"	0.68	5	08-07-08
Max Defl.	0.652"	1"	0.65	4	08-07-08
Span / Depth	20.5	n/a	n/a		00-00-00

Bearing Supports

			Demand/ Resistance Support	Demand/ Resistance Member	Material
Bearing Supports	Dim. (L x W)	Demand			
B0	Wall/Plate	3-1/2" x 7"	3,369 lbs	0.22	0.11
B1	Wall/Plate	3-1/2" x 7"	3,878 lbs	0.26	0.13

Notes

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

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

Design meets User specified (1") Maximum total load deflection criteria.

Calculations assume Member is Fully Braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

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

Design based on Dry Service Condition.

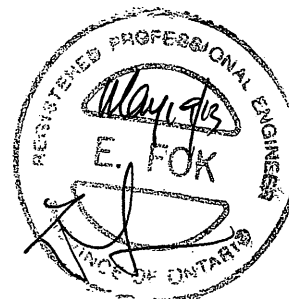
Importance Factor : Normal Part code : Part 4

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

User Notes

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

@ 12" O.C., STAGGERED IN TWO ROWS, PLUS 1/2" Ø BOLTS, NOTED & WASTERS @ 40" O.C., STAGGERED IN 2 ROWS



T-1505018

Site Copy

BC CALC® Design Report



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

December-04-14

Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code: Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

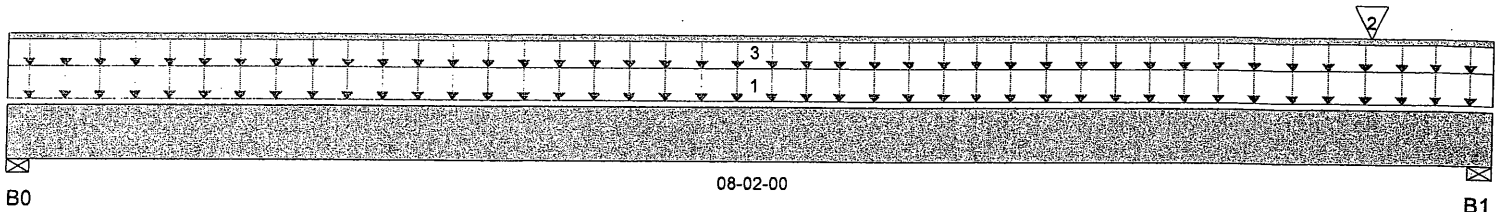
Description: Designs\B16

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 08-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	132 / 0	318 / 0		
B1, 3-1/2"	491 / 0	506 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	FLOOR	Unf. Area (lb/ft^2)	L	00-00-00	08-02-00	40	15			00-08-00
2	PL B14	Conc. Pt. (lbs)	L	07-06-00	07-06-00	405	213			n/a
3	WALL	Unf. Lin. (lb/ft)	L	00-00-00	08-02-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	845 ft-lbs	8,258 ft-lbs	0.1	0	04-03-04
End Shear	765 lbs	5,785 lbs	0.13	1	07-01-00
Total Load Defl.	L/999 (0.039")	n/a	n/a	4	04-02-02
Live Load Defl.	L/999 (0.013")	n/a	n/a	5	04-03-04
Max Defl.	0.039"	n/a	n/a	4	04-02-02
Span / Depth	9.7	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. n/n BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCi®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Bearing Supports

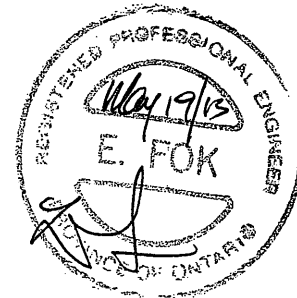
	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	445 lbs	0.18	0.09	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	1,369 lbs	0.36	0.18	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS



T-1505019

Site Copy

BC CALC® Design Report



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

December-04-14

Build 3272

Job Name:

38514

Address:

GREEN VALLEY ESTATES (S42-1B)

City, Province, Postal Code: Bradford, ON

Customer:

BAYVIEW WELLINGTON HOMES

Code reports:

CCMC 12472-R

File Name: S42-1B

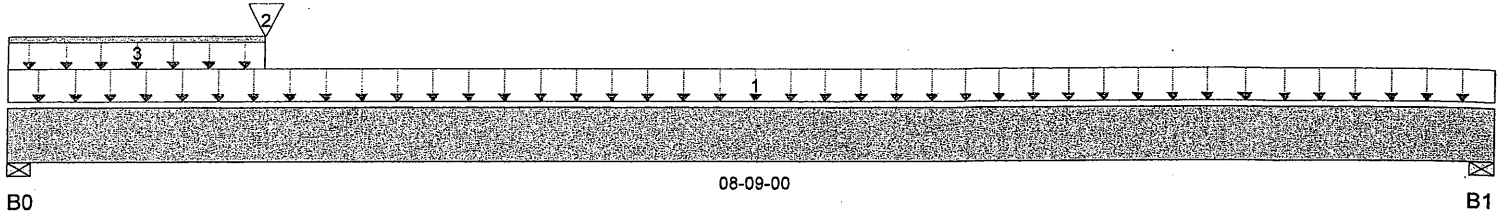
Description: Designs\B17

Specifier:

Designer: F.C.

Company: Alpa Roof Trusses Inc.

Misc:



Total Horizontal Product Length = 08-09-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	994 / 0	548 / 0		
B1, 3-1/2"	323 / 0	179 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	Standard Load	Unf. Area (lb/ft^2)	L	00-00-00	08-09-00	40	20			01-00-00
2	PL B10	Conc. Pt. (lbs)	L	01-06-00	01-06-00	967	420			n/a
3	WALL	Unf. Lin. (lb/ft)	L	00-00-00	01-06-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,582 ft-lbs	12,704 ft-lbs	0.2	1	01-06-00
End Shear	1,996 lbs	5,785 lbs	0.35	1	01-01-00
Total Load Defl.	L/999 (0.08")	n/a	n/a	4	04-00-01
Live Load Defl.	L/999 (0.053")	n/a	n/a	5	04-00-01
Max Defl.	0.08"	n/a	n/a	4	04-00-01
Span / Depth	10.5	n/a	n/a		00-00-00

Bearing Supports

			Demand/ Resistance Support	Demand/ Resistance Member	Material
Bearing Supports		Dim. (L x W)	Demand		
B0	Wall/Plate	3-1/2" x 1-3/4"	2,176 lbs	0.58	0.29
B1	Wall/Plate	3-1/2" x 1-3/4"	708 lbs	0.19	0.09

Notes

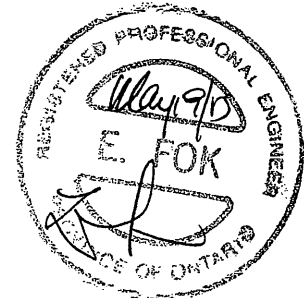
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 Design meets User specified (1") Maximum total load deflection criteria.
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 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

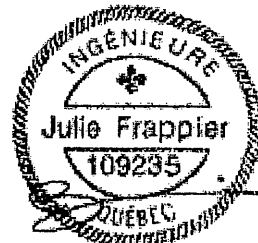
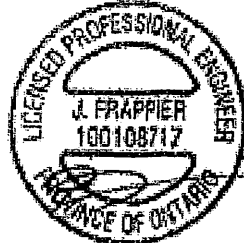
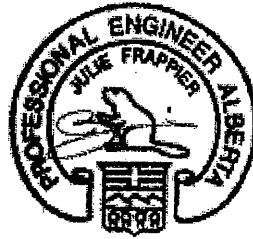
Disclosure

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Maximum Floor Spans

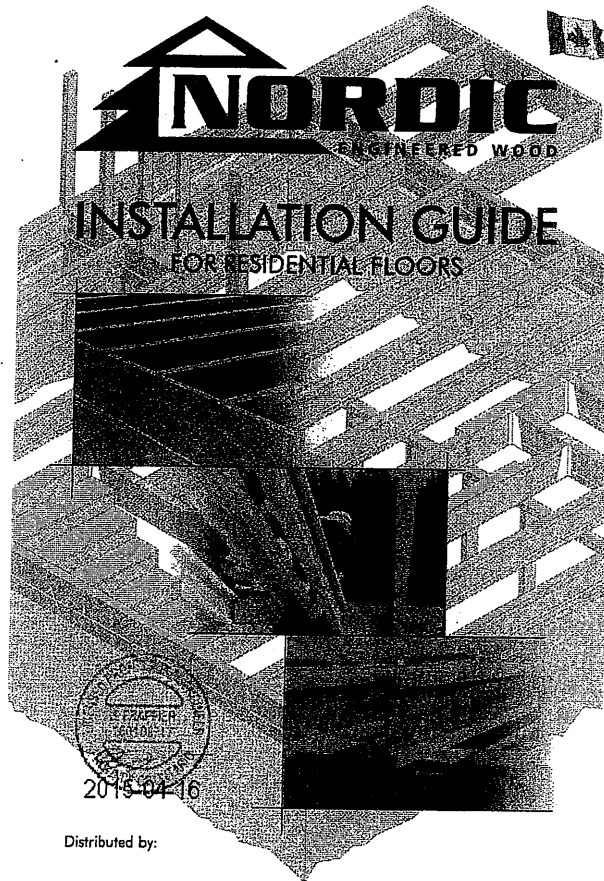
Live Load = 40 psf, Dead Load = 15 psf
Simple Spans, L/360 Deflection Limit
5/8" OSB G&N Sheathing



Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
14"	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
16"	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	N/A	17'-1"	15'-5"	14'-6"	N/A
	NI-40x	17'-11"	16'-11"	16'-4"	N/A	18'-5"	17'-4"	16'-7"	N/A
	NI-60	18'-2"	17'-1"	16'-6"	N/A	18'-7"	17'-6"	16'-10"	N/A
	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A
	NI-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A
11-7/8"	NI-20	19'-6"	18'-1"	17'-5"	N/A	20'-2"	18'-8"	17'-6"	N/A
	NI-40x	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	19'-3"	N/A
	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-5"	20'-5"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-8"	N/A
14"	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-11"	20'-11"	N/A	24'-3"	22'-7"	21'-7"	N/A
	NI-60	24'-0"	22'-3"	21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
16"	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	25'-3"	24'-2"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/360 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, and NBC 2010.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



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SAFETY AND CONSTRUCTION PRECAUTIONS

WARNING

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

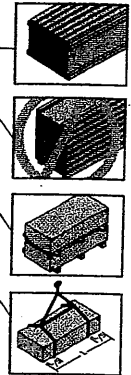
Avoid Accidents by Following these Important Guidelines:

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 center, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Top 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.

STORAGE AND HANDLING GUIDELINES

1. Bundle wrap can be slippery when wet. Avoid walking on wrapped bundles.
2. Store, stack, and handle I-joists vertically and level only.
3. Always stack and handle I-joists in the upright position only.
4. Do not store I-joists in direct contact with the ground and/or flatwise.
5. Protect I-joists from weather, and use spacers to separate bundles.
6. Bundled units should be kept intact until time of installation.
7. When handling I-joists with a crane on the job site, take a few simple precautions to prevent damage to the I-joists and injury to your work crew.
 - Pick I-joists in bundles as shipped by the supplier.
 - Orient the bundles so that the webs of the I-joists are vertical.
 - Pick the bundles at the 5th points, using a spreader bar if necessary.
8. Do not handle I-joists in a horizontal orientation.
9. NEVER USE OR TRY TO REPAIR A DAMAGED I-JOIST.



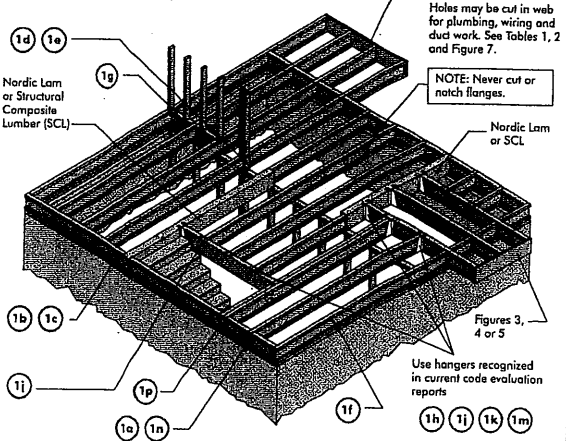
INSTALLING NORDIC I-JOISTS

1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, consult your supplier.
2. Except for cutting to length, I-joist flanges should **never** be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple-span joists must be level.
5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
6. When using hangers, seat I-joists firmly in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joist end and a header.
8. Concentrated loads greater than those that can normally be expected in residential construction should only be applied to the top surface of the top flange. Normal concentrated loads include track lighting fixtures, audio equipment and security cameras. Never suspend unusual or heavy loads from the I-joist's bottom flange. Whenever possible, suspend all concentrated loads from the top of the I-joist. Or, attach the load to blocking that has been securely fastened to the I-joist webs.
9. Never install I-joists where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joists or I-joist blocking panels.
11. For I-joists installed over and beneath bearing walls, use full depth blocking panels, rim board, or squash blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
12. Due to shrinkage, common framing lumber set on edge **may never** be used as blocking or rim boards. I-joist blocking panels or other engineered wood products – such as rim board – must be cut to fit between the I-joists, and an I-joist-compatible depth selected.
13. Provide permanent lateral support of the bottom flange of all I-joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered I-joists at the end support next to the cantilever extension. In the completed structure, the gypsum wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or struts must be used.
14. If square-edge panels are used, edges must be supported between I-joists with 2x4 blocking. Glue panels to blocking to minimize squeaks. Blocking is not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment layer is installed.
15. Nail spacing: Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

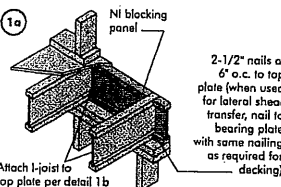
FIGURE 1

TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

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

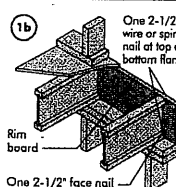


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.



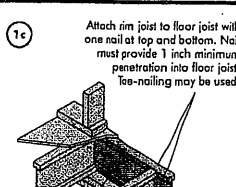
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
Ni Joists	3,300

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



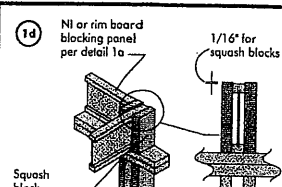
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

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



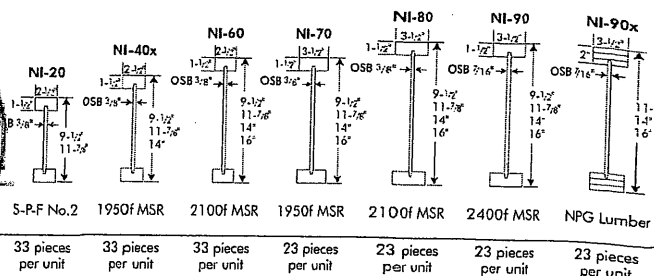
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

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



Pair of Squash Blocks	Maximum Factored Vertical Pair of Squash Blocks (lb)
2x Lumber	5,500
1-1/8" Rim Board Plus	4,300

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



Refer to the *Installation Guide for Residential Floors* for additional information.
SCMC EVALUATION REPORT 13032-R

WEB HOLE SPECIFICATIONS

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The distance between the inside edge of the support and the centraline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
2. I-joint 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 or the maximum depth of a duct chase opening that can be cut into an I-joint web shall equal the clear distance between the flanges of the I-joint minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole or opening and the adjacent I-joint 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 or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knockout is **not** considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller are permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.

9. 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.
10. All holes and duct chase openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

TABLE 1
LOCATION OF CIRCULAR HOLES IN JOIST WEBS
Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

Joist Depth	Joist Series	Minimum Distance from Inside Face of Any Support to Centre of Hole (ft - in.)														
		Round Hole Diameter (in.)														
		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"	6-10"	---	---	---	---	---	---	---	---	---
	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-70	2-0"	3-4"	4-9"	6-3"	8-0"	8-4"	---	---	---	---	---	---	---	---	---
	NI-80	2-3"	3-6"	5-0"	6-6"	8-2"	8-8"	---	---	---	---	---	---	---	---	---
11-7/8"	NI-20	0-7"	0-8"	1-0"	2-4"	3-8"	4-0"	5-0"	6-6"	7-9"	---	---	---	---	---	---
	NI-40x	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-5"	7-0"	8-4"	---	---	---	---	---	---
	NI-60	0-7"	1-8"	3-0"	4-3"	5-9"	6-0"	7-3"	8-10"	10-0"	---	---	---	---	---	---
	NI-70	1-3"	2-6"	4-0"	5-4"	6-9"	7-2"	8-4"	10-0"	11-2"	---	---	---	---	---	---
	NI-80	1-6"	2-10"	4-2"	5-6"	7-0"	7-5"	8-8"	10-3"	11-4"	---	---	---	---	---	---
14"	NI-90	0-7"	0-8"	1-5"	3-2"	4-10"	5-4"	6-9"	8-9"	10-2"	---	---	---	---	---	---
	NI-90x	0-7"	0-8"	0-9"	2-5"	4-4"	4-9"	6-3"	---	---	---	---	---	---	---	---
	NI-40x	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	6-6"	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-70	0-8"	1-10"	3-0"	4-5"	5-10"	6-2"	7-3"	8-9"	9-9"	10-4"	12-0"	13-5"	---	---	---
16"	NI-80	0-10"	2-0"	3-4"	4-9"	6-2"	6-5"	7-6"	9-0"	10-0"	10-8"	12-4"	13-9"	---	---	---
	NI-90	0-7"	0-8"	0-10"	2-5"	4-0"	4-5"	5-9"	7-5"	8-8"	9-4"	11-4"	12-11"	---	---	---
	NI-90x	0-7"	0-8"	0-8"	2-0"	3-9"	4-2"	5-5"	7-3"	8-5"	9-2"	---	---	---	---	---
	NI-60	0-7"	0-8"	0-8"	1-6"	2-10"	3-2"	4-2"	5-6"	6-4"	7-0"	8-5"	9-8"	10-2"	12-2"	13-9"
	NI-70	0-7"	1-0"	2-3"	3-6"	4-10"	5-3"	6-3"	7-8"	8-6"	9-2"	10-8"	12-0"	12-4"	14-0"	15-6"
16"	NI-80	0-7"	1-3"	2-6"	3-10"	5-3"	6-6"	6-6"	8-0"	9-0"	9-5"	11-0"	12-3"	12-9"	14-5"	16-0"
	NI-90	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"	13-9"	15-4"
	NI-90x	0-7"	0-8"	0-9"	2-0"	3-6"	4-0"	5-0"	6-9"	7-9"	8-4"	10-2"	11-6"	12-0"	---	---

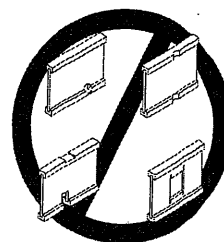
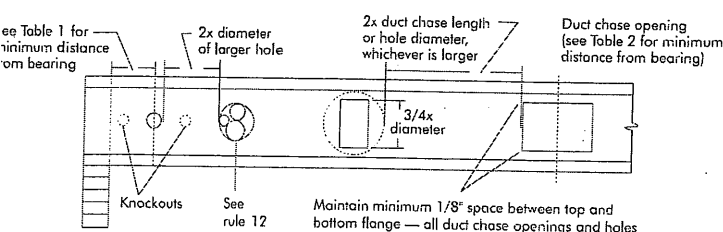
Above table may be used for I-joist spacing of 24 inches on centre or less.
Hole location distance is measured from inside face of supports to centre of hole.
Distances in this chart are based on uniformly loaded joists.
The above table is based on the I-joists being used at their maximum spans. The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

TABLE 2
DUCT CHASE OPENING SIZES AND LOCATIONS
Simple Span Only

Joist Depth	Joist Series	Minimum distance from inside face of supports to centre of opening (ft - in.)									
		Duct Chase Length (in.)									
		8	10	12	14	16	18	20	22	24	
9-1/2"	NI-20	4'-1"	4'-5"	4'-10"	5'-4"	5'-8"	6'-1"	6'-6"	7'-1"	7'-5"	
	NI-40x	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8'-2"	8'-6"	
	NI-60	5'-4"	5'-9"	6'-2"	6'-7"	7'-1"	7'-5"	8'-0"	8'-3"	8'-9"	
	NI-70	5'-1"	5'-5"	5'-10"	6'-3"	6'-7"	7'-1"	7'-6"	8'-1"	8'-4"	
	NI-80	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8'-2"	8'-6"	
11-7/8"	NI-20	5'-9"	6'-2"	6'-6"	7'-1"	7'-5"	7'-9"	8'-3"	8'-9"	9'-4"	
	NI-40x	6'-8"	7'-2"	7'-6"	8'-1"	8'-6"	9'-1"	9'-6"	10'-1"	10'-9"	
	NI-60	7'-3"	7'-8"	8'-0"	8'-6"	9'-0"	9'-3"	9'-9"	10'-3"	11'-0"	
	NI-70	7'-1"	7'-4"	7'-9"	8'-3"	8'-7"	9'-1"	9'-6"	10'-1"	10'-4"	
	NI-80	7'-2"	7'-7"	8'-0"	8'-5"	8'-10"	9'-3"	9'-8"	10'-2"	10'-8"	
14"	NI-90	7'-6"	7'-11"	8'-4"	8'-9"	9'-2"	9'-7"	10'-1"	10'-7"	10'-11"	
	NI-90x	7'-7"	8'-1"	8'-5"	8'-10"	9'-4"	9'-8"	10'-2"	10'-8"	11'-2"	
	NI-40x	8'-1"	8'-7"	9'-0"	9'-6"	10'-1"	10'-7"	11'-2"	12'-0"	12'-8"	
	NI-60	8'-9"	9'-3"	9'-8"	10'-1"	10'-6"	11'-1"	11'-6"	13'-3"	13'-0"	
	NI-70	8'-7"	9'-1"	9'-5"	9'-10"	10'-4"	10'-8"	11'-2"	11'-7"	12'-3"	
16"	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7"	11'-1"	11'-5"	12'-1"	12'-6"	
	NI-90	9'-2"	9'-8"	10'-0"	10'-6"	10'-11"	11'-5"	11'-9"	12'-4"	12'-11"	
	NI-90x	9'-4"	9'-9"	10'-3"	10'-7"	11'-1"	11'-7"	12'-1"	12'-7"	13'-2"	
	NI-60	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	14'-1"	14'-10"	
	NI-70	10'-1"	10'-5"	11'-0"	11'-4"	11'-10"	12'-3"	12'-8"	13'-3"	14'-0"	
16"	NI-80	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12'-7"	13'-1"	13'-8"	14'-4"	
	NI-90	10'-9"	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14'-2"	14'-10"	
	NI-90x	11'-1"	11'-5"	11'-10"	12'-4"	12'-10"	13'-2"	13'-9"	14'-4"	15'-2"	

1. Above table may be used for I-joist spacing of 24 inches on centre or less.
2. Duct chase opening location distance is measured from inside face of supports to centre of opening.
3. The above table is based on simple-span joists only. For other applications, contact your local distributor.
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480.
5. 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.

FIGURE 7
FIELD-CUT HOLE LOCATOR



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

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

Holes in webs should be cut with a sharp saw.

For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by 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.

SAFETY AND CONSTRUCTION PRECAUTIONS



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



ever stack building materials over unsheathed I-joists. Once sheathed, do not over-stress joists with concentrated loads from building materials.

WARNING: 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-briding 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" 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 canilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-briding.
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.



PRODUCT WARRANTY

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

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

1a NI blocking panel

Attach I-joist to top plate per detail 1b

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

Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
NI Joists	3,300

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

1b Rim board

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

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

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

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

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

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

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

1d NI or rim board blocking panel per detail 1a

Squash block

Pair of Squash Blocks

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

Provide lateral bracing per detail 1a or 1b

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

1g Joist attachment per detail 1b

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

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

NI blocking panel per detail 1a

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

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

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

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

* Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-O437 Standard.
** For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 2" thick flanges use net depth minus 4-1/4".

1i Top- or face-mount hanger

Double I-joist header

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

Backer block required (both sides for face-mount hangers)

1j Nordic Lam or Structural Composite Lumber (SCL)

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

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

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

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

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

Top-mount hanger installed per manufacturer's recommendations

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

Backer block attached per detail 1h. Nail with twelve 3" nails, clinch when possible.

Filler block per detail 1p

Install hanger per manufacturer's recommendations

Maximum support capacity = 1,620 lbs.

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

Attach I-joist per detail 1b

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

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

NI blocking panel

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

1p FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

Filler block

Offset nails from opposite face by 6"

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

NOTES:

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

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

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

Rim board

2x4 min. (1/8" gap minimum)

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

I-joist blocking panel

One 2-1/2" nail one side only

NOTES:

- In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local code requirements for spacing of the blocking.
- All nails are common spiral in this detail.

WEB STIFFENERS

- RECOMMENDATIONS:**
- A **bearing stiffener** is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found of the I-joist Construction Guide (C101). The gap between the stiffener and the flange is at the top.
 - A **bearing stiffener** is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
 - A **load stiffener** is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

FIGURE 2
WEB STIFFENER INSTALLATION DETAILS

Flange width 2-1/2" or 3-1/2"

Approx. 2" 1/8"-1/4" Gap

(4) 2-1/2" nails, 3" nails required for I-joists with 3-1/2" flange width

No Gap

See the adjacent table for web stiffener size requirements

CONCENTRATED LOAD (Load stiffener)

Tight Joint No Gap

Gap

END BEARING (Bearing stiffener)

Gap

Tight Joint No Gap

STIFFENER SIZE REQUIREMENTS

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

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET

Method 1 — SHEATHING REINFORCEMENT ONE SIDE

Rim board or wood structural panel closure (3/4" minimum thickness); attach per detail 1b

NI blocking panel or rim board blocking, attach per detail 1g

Attach I-joist to plate per detail 1b

2-1/2" nails

3-1/2" min. bearing required

Method 2 — SHEATHING REINFORCEMENT TWO SIDES

Use same installation as Method 1 but reinforce both sides of I-joist with sheathing.

Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

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

RIM BOARD INSTALLATION DETAILS

8a ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

Rim Board Joint Between Floor Joists

(1) 2-1/2" nail top and bottom (typical)

2-1/2" nails at 6" o.c. (typical)

Rim board joint

2-1/2" toe-nails at 6" o.c. (typical)

Rim Board Joint at Corner

1-1/2"

2-1/2" nails

h

1-1/2"

Rim board

Top or sole plate

30°

1/3

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The distance between the inside edge of the support and the centreline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
2. I-joint 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 or the maximum depth of a duct chase opening that can be cut into an I-joint web shall equal the clear distance between the flanges of the I-joint minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole or opening and the adjacent I-joint 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 or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knockout is not considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.
9. 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.
10. All holes and duct chase openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

TABLE 1
LOCATION OF CIRCULAR HOLES IN JOIST WEBS
Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

Joist Depth	Joist Series	Minimum distance from inside face of any support to centre of hole (ft.-in.) Round hole diameter (in.)															Span adjustment Factor
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4	
10	200	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	240	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	280	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	320	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
12	240	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	280	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	320	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	360	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
14	280	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
	320	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
	360	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
	400	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
16	320	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	360	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	400	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
	440	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
18	360	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
	400	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
	440	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
	480	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
20	400	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
	440	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
	480	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
	520	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
22	440	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	480	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	520	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	560	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
24	480	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
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	560	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
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26	520	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
	560	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
	600	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
	640	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
28	560	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
	600	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
	640	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
	680	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
30	600	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	640	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	680	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
32	640	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	
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	760	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	
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	840	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	
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	840	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
	880	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
	920	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
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	960	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	
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	920	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	960	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	1000	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
46	920	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
	960	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
	1000	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
	1040	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
48	960	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
	1000	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
	1040	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
	1080	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
50	1000	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
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	1080	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	1120	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
52	1040	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	
	1080	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	
	1120	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	
	1160	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	
54	1080	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	
	1120	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	
	1160	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	
	1200	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	
56	1120	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
	1160	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
	1200	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
	1240	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
58	1160	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	
	1200	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	
	1240	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	
	1280	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	
60	1200	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
	1240	60	60	60	60	60	60	60	60	60	60	60	6				

1. Above table may be used for I-joint spacing of 24 inches on centre or less.
2. Hole location distance is measured from inside face of supports to centre of hole.
3. Distances in this chart are based on uniformly loaded joists.

OPTIONAL:

The above table is based on the I-joists used at their maximum span. If the I-joists are placed at less than their full maximum span (see Maximum Span Table) the minimum distance from the centreline of the hole to the face of any support (D) as given above may be reduced as follows:

$$\text{Reduced } D = \frac{\text{Actual } D}{\text{SAF}} \times D$$

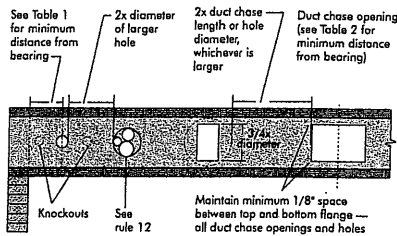
Where:

- Actual = Distance from the inside face of any support to centre of hole, reduced for less-than-maximum span applications (ft.).
- SAF = The actual measured span distance between the inside faces of supports (ft.).
- D = Span Adjustment Factor given in this table.
- D = The minimum distance from the inside face of any support to centre of hole from this table.

If Actual is greater than 1, use 1 in the above calculation for Actual.



FIGURE 7
FIELD-CUT HOLE LOCATOR



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

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



Never drill, cut or notch the flange, or over-cut the web.
Holes in webs should be cut with a sharp saw.

For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by 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.

TABLE 2
DUCT CHASE OPENING SIZES AND LOCATIONS — Simple Span Only

Joist Depth	Joist Series	Minimum distance from inside face of any support to centre of opening (ft.-in.) Duct chase length (in.)											
		8	10	12	14	16	18	20	22	24			
10	200	10	10	10	10	10	10	10	10	10			
12	240	12	12	12	12	12	12	12	12	12			
14	280	14	14	14	14	14	14	14	14	14			
16	320	16	16	16	16	16	16	16	16	16			
18	360	18	18	18	18	18	18	18	18	18			
20	400	20	20	20	20	20	20	20	20	20			
22	440	22	22	22	22	22	22	22	22	22			
24	480	24	24	24	24	24	24	24	24	24			
26	520	26	26	26	26	26	26	26	26	26			
28	560	28	28	28	28	28	28	28	28	28			
30	600	30	30	30	30	30	30	30	30	30			
32	640	32	32	32	32	32	32	32	32	32			
34	680	34	34	34	34	34	34	34	34	34			
36	720	36	36	36	36	36	36	36	36	36			
38	760	38	38	38	38	38	38	38	38	38			
40	800	40	40	40	40	40	40	40	40	40			
42	840	42	42	42	42	42	42	42	42	42			
44	880	44	44	44	44	44	44	44	44	44			
46	920	46	46	46	46	46	46	46	46	46			
48	960	48	48	48	48	48	48	48	48	48			
50	1000	50	50	50	50	50	50	50	50	50			

1. Above table may be used for I-joint spacing of 24 inches on centre or less.
2. Duct chase opening location distance is measured from inside face of supports to centre of opening.
3. The above table is based on simple-span joists only. For other applications, contact your local distributor.
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480. For other applications, contact your local distributor.

INSTALLING THE GLUED FLOOR SYSTEM

1. Wipe any mud, dirt, water, or ice from I-joint flanges before gluing.
2. Snap a chalk line across the I-joists four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
3. Spread only enough glue to lay one or two panels at a time, or follow specific recommendations from the glue manufacturer.
4. Lay the first panel with tongue side to the wall, and nail in place. This protects the tongue of the next panel from damage when tapped into place with a block and sledgehammer.
5. Apply a continuous line of glue (about 1/4-inch diameter) to the top flange of a single I-joint. Apply glue in a winding pattern on wide areas, such as with double I-joists.
6. Apply two lines of glue on I-joists where panel ends butt to assure proper gluing of each end.
7. After the first row of panels is in place, spread glue in the groove of one or two panels at a time before laying the next row. Glue line may be continuous or spaced, but avoid squeeze-out by applying a thinner line (1/8 inch) than used on I-joint flanges.
8. Tap the second row of panels into place, using a block to protect groove edges.
9. Stagger end joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch at all edges, including T&G edges, is recommended. (Use a spacer tool or an 2-1/2" common nail to assure accurate and consistent spacing.)
10. Complete all nailing of each panel before glue sets. Check the manufacturer's recommendations for cure time. (Warm weather accelerates glue setting.) Use 2" ring- or screw-shank nails for panels 3/4-inch thick or less, and 2-1/2" ring- or screw-shank nails for thicker panels. Space nails per the table below. Closer nail spacing may be required by some codes, or for diaphragm construction. The finished deck can be walked on right away and will carry construction loads without damage to the glue bond.

FASTENERS FOR SHEATHING AND SUBFLOORING(1)

Maximum Spacing (ft.)	Minimum Panel Thickness (in.)	Common Wire or Spiral Nails	Ring Threaded Nails or Screws	Staples	Maximum Spacing of Fasteners	Maximum Spacing of Fasteners
16	5/8	2"	1-3/4"	2"	6"	12"
20	3/4	2"	1-3/4"	2"	6"	12"
24	3/4	2"	1-3/4"	2"	6"	12"

1. Fasteners of sheathing and subflooring shall conform to the above table.
2. Staples shall not be less than 1/16-inch in diameter or thickness, with not less than a 3/8-inch crown driven with the crown parallel to framing.
3. Flooring screws shall not be less than 1/8-inch in diameter.
4. Special conditions may impose heavy traffic and concentrated loads that require construction in excess of the minimums shown.
5. Use only adhesives conforming to CAN/CGSB-71.26 Standard, Adhesives for Field-Gluing Plywood to Lumber Framing for Floor System, applied in accordance with the manufacturer's recommendations. If OSB panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with panel manufacturer.

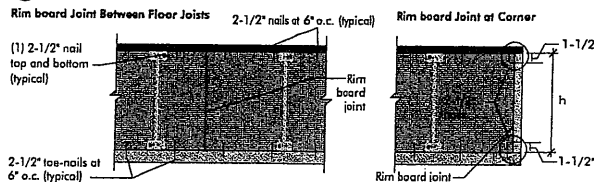
Ref.: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

IMPORTANT NOTE:

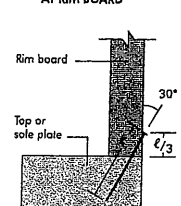
Floor sheathing must be field glued to the I-joint flanges in order to achieve the maximum spans shown in this document. If sheathing is nailed only, I-joint spans must be verified with your local distributor.

RIM BOARD INSTALLATION DETAILS

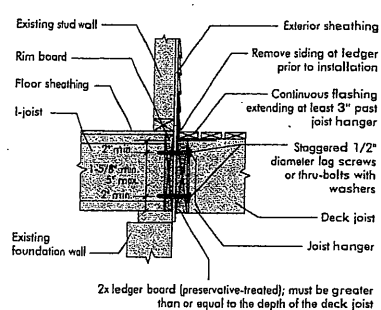
8a ATTACHMENT DETAILS WHERE RIM BOARDS ABUT



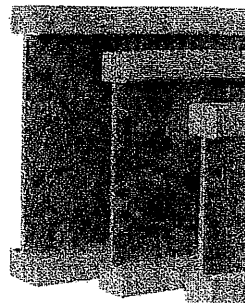
8b TOE-NAIL CONNECTION AT RIM BOARD



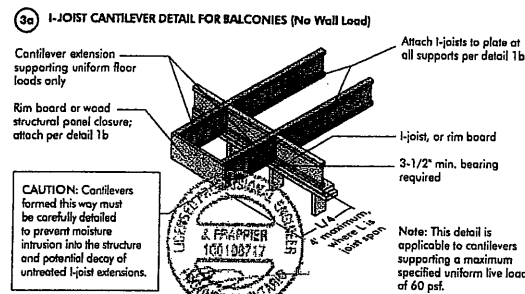
8c 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL



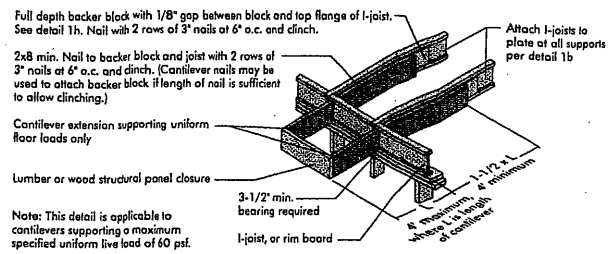
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CANTILEVER DETAILS FOR BALCONIES (NO WALL LOAD)

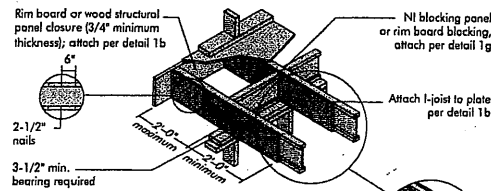


3b LUMBER CANTILEVER DETAIL FOR BALCONIES (No Wall Load)



CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

4a Method 1 — SHEATHING REINFORCEMENT ONE SIDE



Method 2 — SHEATHING REINFORCEMENT TWO SIDES

- Use same installation as Method 1 but reinforce both sides of I-joist with sheathing.
- Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

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

4b Alternate Method 2 — DOUBLE I-JOIST

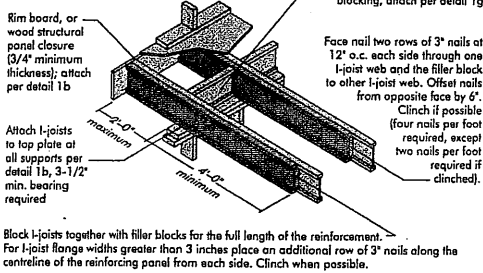
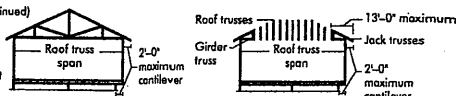


FIGURE 4 (continued)

See table below for NI reinforcement requirements at cantilever.



For hip roofs with the jack trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

CANTILEVER REINFORCEMENT METHODS ALLOWED

JOIST DEPTH (in.)	ROOF TRUSS SPAN (ft)	LL = 30 psf, DL = 15 psf				ROOF LOADING (UNFACTORED)				LL = 50 psf, DL = 15 psf			
		JOIST SPACING (in.)				JOIST SPACING (in.)				JOIST SPACING (in.)			
12	12	N	N	N	N	N	N	N	N	N	N	N	N
12	16	N	N	N	N	N	N	N	N	N	N	N	N
12	19.2	N	N	N	N	N	N	N	N	N	N	N	N
12	24	N	N	N	N	N	N	N	N	N	N	N	N
16	12	N	N	N	N	N	N	N	N	N	N	N	N
16	16	N	N	N	N	N	N	N	N	N	N	N	N
16	19.2	N	N	N	N	N	N	N	N	N	N	N	N
16	24	N	N	N	N	N	N	N	N	N	N	N	N
20	12	N	N	N	N	N	N	N	N	N	N	N	N
20	16	N	N	N	N	N	N	N	N	N	N	N	N
20	19.2	N	N	N	N	N	N	N	N	N	N	N	N
20	24	N	N	N	N	N	N	N	N	N	N	N	N
24	12	N	N	N	N	N	N	N	N	N	N	N	N
24	16	N	N	N	N	N	N	N	N	N	N	N	N
24	19.2	N	N	N	N	N	N	N	N	N	N	N	N
24	24	N	N	N	N	N	N	N	N	N	N	N	N

1. N = No reinforcement required.

1 = NI reinforced with 3/4" wood structural panel on one side only.

2 = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.

X = Try a deeper joist or closer spacing.

2. Maximum design load shall be: 15 psf roof dead load, 55 psf floor total load, and 80 psf wall load. Wall load is based on 3'-0" maximum width window or door openings.

For larger openings, or multiple 3'-0" width openings spaced less than 6'-0" o.c., additional joists beneath the opening's cripple studs may be required.

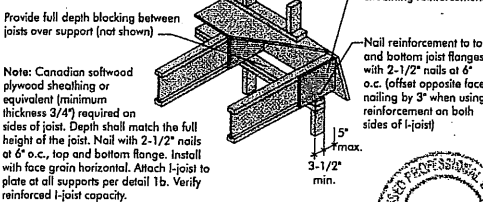
3. Table applies to joists 12" to 24" o.c. that meet the floor span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480. Use 12" o.c. requirements for lesser spacing.

4. For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.

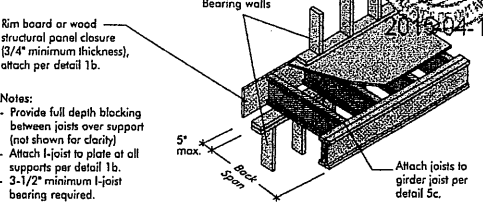
5. Cantilevered joists supporting girder trusses or roof beams may require additional reinforcing.

BRICK CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

5a SHEATHING REINFORCEMENT



5b SET-BACK DETAIL



5c SET-BACK CONNECTION

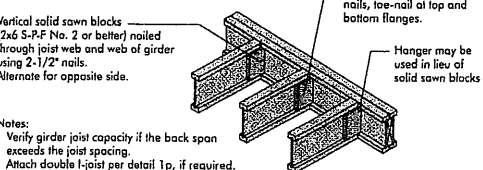
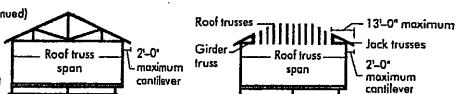


FIGURE 5 (continued)

See table below for NI reinforcement requirements at cantilever.



For hip roofs with the jack trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

JOIST DEPTH (in.)	ROOF TRUSS SPAN (ft)	LL = 30 psf, DL = 15 psf				ROOF LOADING (UNFACTORED)				LL = 50 psf, DL = 15 psf			
		JOIST SPACING (in.)				JOIST SPACING (in.)				JOIST SPACING (in.)			
12	12	N	N	N	N	N	N	N	N	N	N	N	N
12	16	N	N	N	N	N	N	N	N	N	N	N	N
12	19.2	N	N	N	N	N	N	N	N	N	N	N	N
12	24	N	N	N	N	N	N	N	N	N	N	N	N
16	12	N	N	N	N	N	N	N	N	N	N	N	N
16	16	N	N	N	N	N	N	N	N	N	N	N	N
16	19.2	N	N	N	N	N	N	N	N	N	N	N	N
16	24	N	N	N	N	N	N	N	N	N	N	N	N
20	12	N	N	N	N	N	N	N	N	N	N	N	N
20	16	N	N	N	N	N	N	N	N	N	N	N	N
20	19.2	N	N	N	N	N	N	N	N	N	N	N	N
20	24	N	N	N	N	N	N	N	N	N	N	N	N
24	12	N	N	N	N	N	N	N	N	N	N	N	N
24	16	N	N	N	N	N	N	N	N	N	N	N	N
24	19.2	N	N	N	N	N	N	N	N	N	N	N	N
24	24	N	N	N	N	N	N	N	N	N	N	N	N

1. N = No reinforcement required.

1 = NI reinforced with 3/4" wood structural panel on one side only.

2 = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.

X = Try a deeper joist or closer spacing.

2. Maximum design load shall be: 15 psf roof dead load, 55 psf floor total load, and 80 psf wall load. Wall load is based on 3'-0" maximum width window or door openings.

For larger openings, or multiple 3'-0" width openings spaced less than 6'-0" o.c., additional joists beneath the opening's cripple studs may be required.

3. Table applies to joists 12" to 24" o.c. that meet the floor span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480. Use 12" o.c. requirements for lesser spacing.

4. For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.

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

MAXIMUM FLOOR SPANS

- Maximum clear spans applicable to simple-span or multiple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration and a live load deflection limit of L/480. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less, or 3/4 inch for joist spacing of 24 inches. Adhesive shall meet the requirements given in CGS-71.26 Standard. No concrete topping or bridging element was assumed. Increased spans may be achieved with the use of gypsum and/or a row of blocking at mid-span.
- Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniform loads, an engineering analysis may be required based on the use of the design properties.
- Tables are based on Limit States Design per CAN/CSA C08-09 Standard, and NBC 2010.
- SI units conversion: 1 inch = 25.4 mm
1 foot = 0.305 m

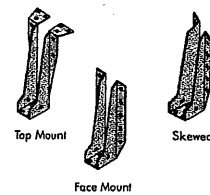
MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS

Joist Depth	Joist Series	Simple span				Multiple spans			
		On centre spacing				On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
10"	NI-10	10.0	14.0	15.5	18.0	10.0	14.0	15.5	18.0
12"	NI-12	12.0	17.0	19.0	22.0	12.0	17.0	19.0	22.0
14"	NI-14	14.0	20.0	22.0	26.0	14.0	20.0	22.0	26.0
16"	NI-16	16.0	23.0	26.0	30.0	16.0	23.0	26.0	30.0
18"	NI-18	18.0	26.0	30.0	34.0	18.0	26.0	30.0	34.0
20"	NI-20	20.0	29.0	34.0	38.0	20.0	29.0	34.0	38.0
22"	NI-22	22.0	32.0	38.0	42.0	22.0	32.0	38.0	42.0
24"	NI-24	24.0	35.0	42.0	46.0	24.0	35.0	42.0	46.0
26"	NI-26	26.0	38.0	46.0	50.0	26.0	38.0	46.0	50.0
28"	NI-28	28.0	41.0	50.0	54.0	28.0	41.0	50.0	54.0
30"	NI-30	30.0	44.0	54.0	58.0	30.0	44.0	54.0	58.0
32"	NI-32	32.0	47.0	58.0	62.0	32.0	47.0	58.0	62.0
34"	NI-34	34.0	50.0	62.0	66.0	34.0	50.0	62.0	66.0
36"	NI-36	36.0	53.0	66.0	70.0	36.0	53.0	66.0	70.0
38"	NI-38	38.0	56.0	70.0	74.0	38.0	56.0	70.0	74.0
40"	NI-40	40.0	59.0	74.0	78.0	40.0	59.0	74.0	78.0

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I-JOIST HANGERS

- Hangers shown illustrate the three most commonly used metal hangers to support I-joists.
- All nailing must meet the hanger manufacturer's recommendations.
- Hangers should be selected based on the joist depth, flange width and load capacity based on the maximum spans.
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.



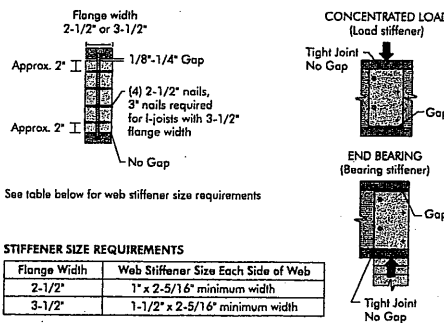
WEB STIFFENERS

RECOMMENDATIONS:

- A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found in the I-joist Construction Guide (C101). The gap between the stiffener and the flange is at the top.
- A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
- A load stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

SI units conversion: 1 inch = 25.4 mm

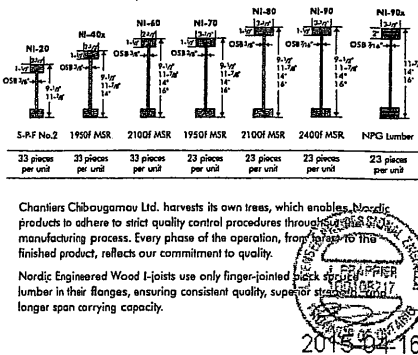
FIGURE 2
WEB STIFFENER INSTALLATION DETAILS



STIFFENER SIZE REQUIREMENTS

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

NORDIC I-JOIST SERIES



Chantiers Chibougamou Ltd. harvests its own trees, which enables Nordic products to adhere to strict quality control procedures throughout the manufacturing process. Every phase of the operation, from harvest to the finished product, reflects our commitment to quality.

Nordic Engineered Wood I-joists use only finger-jointed black spruce lumber in their flanges, ensuring consistent quality, superior strength and longer span carrying capacity.

2015-04-16

1e

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

1f

Use single I-joist for loads up to 3,300 plf, double I-joists for loads up to 6,600 plf (filler block not required). Attach I-joist to top plate using 2-1/2" nails at 6" o.c.

1g

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

1h

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

1i

Nordic Larn or SCL. 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.

1m

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

1n

Do not bevel-cut joist beyond inside face of wall. Attach I-joist per detail 1b.

1p

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

1r

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

1s

One 2-1/2" nails at top and bottom flange. Two 2-1/2" nails from each web to lumber piece. 2x4 min. (1/8" gap minimum). One 2-1/2" nails one side only. 2-1/2" nails at 6" o.c.