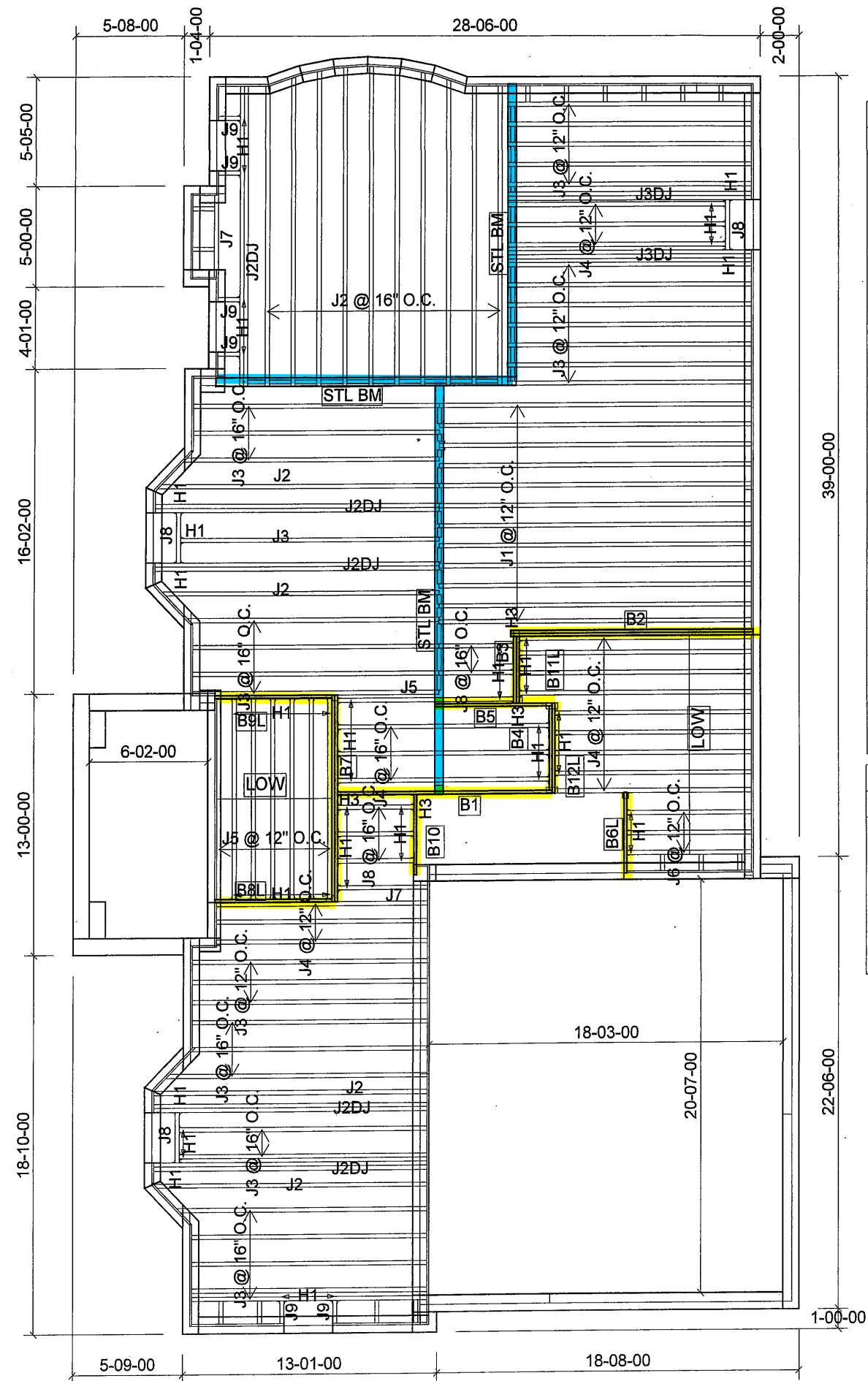
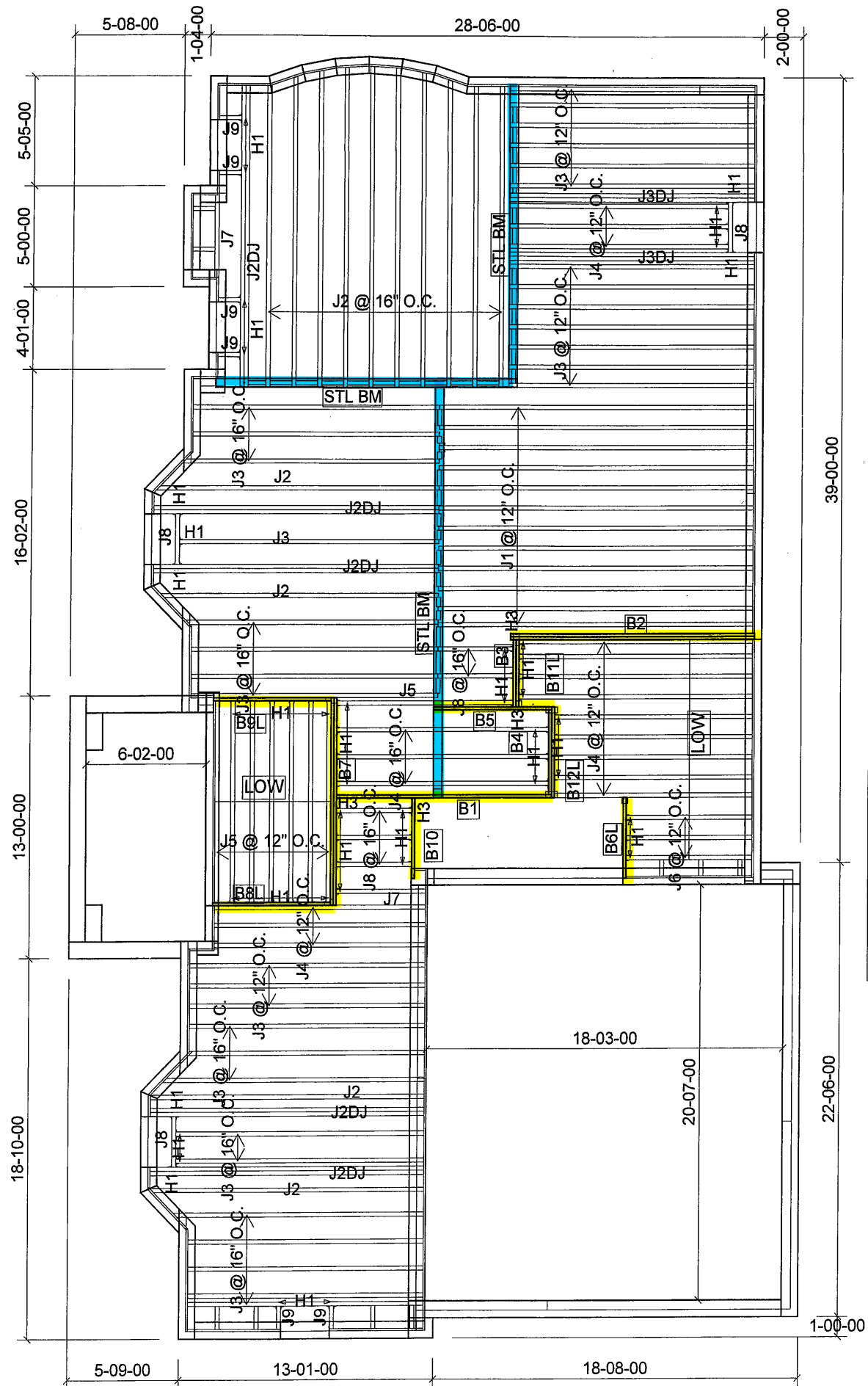




Connector Summary		
Qty	Manuf	Product
32	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
2	H3	HUS1.81/10
2	H3	HUS1.81/10

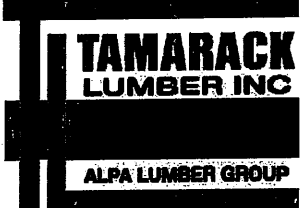
SITE COPY

1st FLOOR



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	12
J2	16-00-00	9 1/2" NI-40x	1	14
J2DJ	16-00-00	9 1/2" NI-40x	2	10
J3	14-00-00	9 1/2" NI-40x	1	34
J3DJ	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	18
J5	10-00-00	9 1/2" NI-40x	1	8
J6	8-00-00	9 1/2" NI-40x	1	3
J7	6-00-00	9 1/2" NI-40x	1	2
J8	4-00-00	9 1/2" NI-40x	1	8
J9	2-00-00	9 1/2" NI-40x	1	6
B2	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B1	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B7	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B8L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B9L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B12L	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B4	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B10	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B11L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B3	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B6L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
32	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
2	H3	HUS1.81/10
2	H3	HUS1.81/10



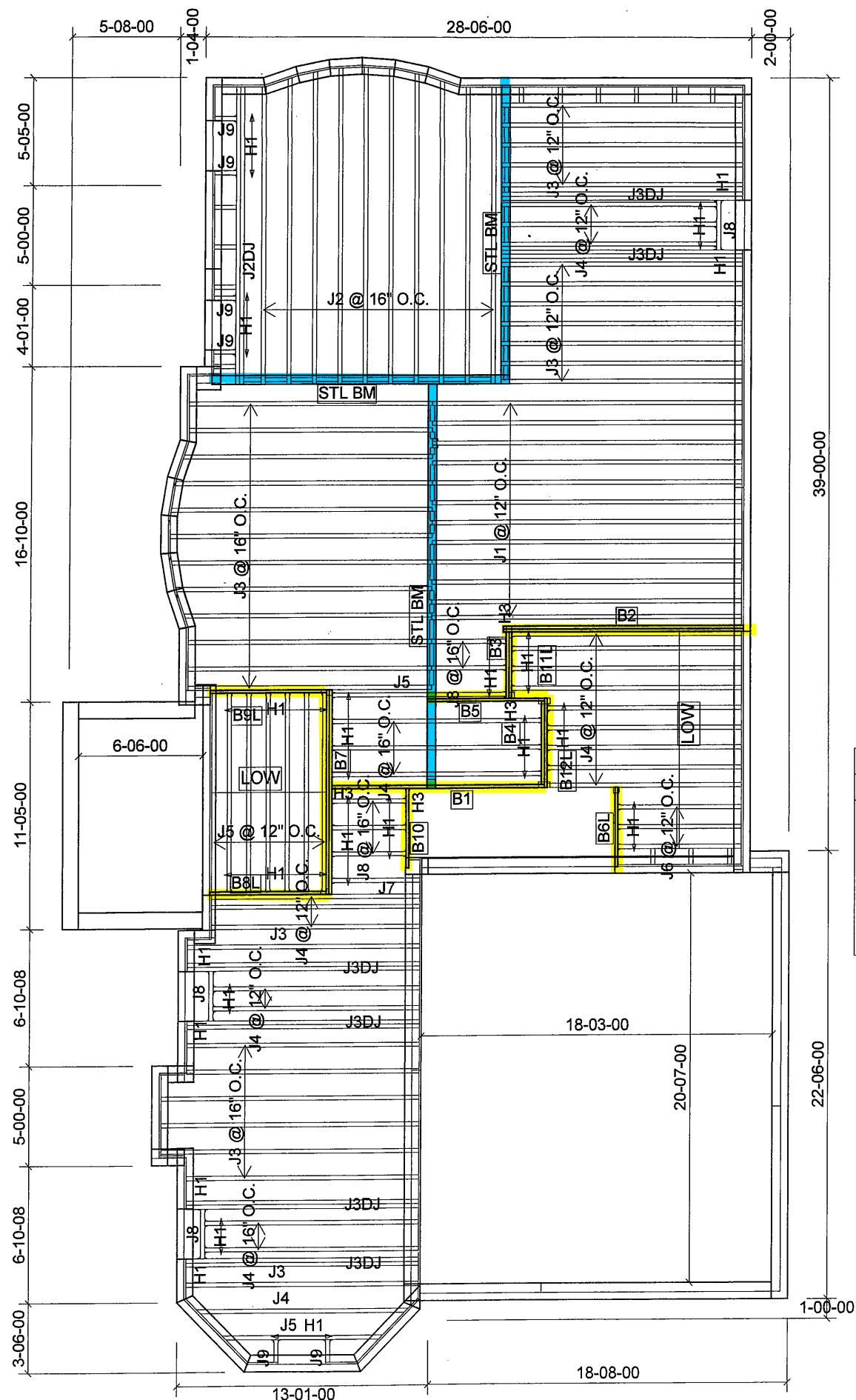
FROM PLAN DATED: JAN 2017
BUILDER: BAYVIEW WELLINGTON
SITE: GREEN VALLEY EAST
MODEL: S38-8C BAROSSA 8C
ELEVATION: A
LOT:
CITY: BRADFORD
SALESMAN: M D
DESIGNER: CZ
REVISION:
NOTES:
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2
S.P.F REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS. SEE
FIGURE 1. CANTILEVERED JOISTS
INCLUDING CANT' OVER BRICK REQ.
I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS.
SEE FIGURES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS.
FOR HOLES INCLUDING DUCT
CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7, TABLES 1 & 2.
CERAMIC TILE APPLICATION AS PER
O.B.C 9.30.6.
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft
SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

1st FLOOR

WOD. CONDITION

SITE COPY

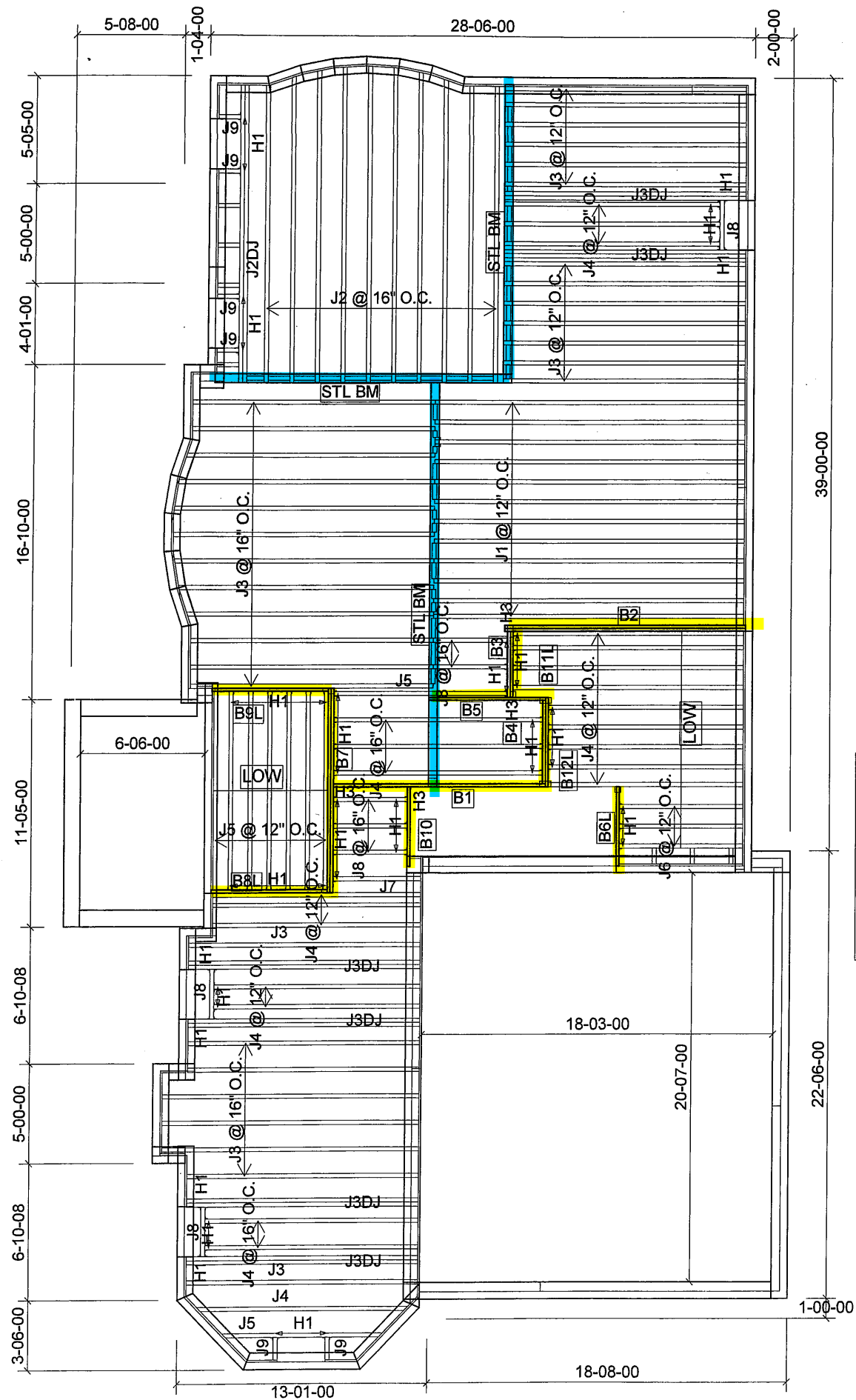


Connector Summary		
Qty	Manuf	Product
32	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
9	H1	IUS2.56/9.5
2	H3	HUS1.81/10
2	H3	HUS1.81/10

NOTES:
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2
S.P.F REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS. SEE
FIGURE 1. CANTILEVERED JOISTS
INCLUDING CANT' OVER BRICK REQ.
I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS.
SEE FIGURES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS.
FOR HOLES INCLUDING DUCT
CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7, TABLES 1 & 2.
CERAMIC TILE APPLICATION AS PER
O.B.C 9.30.6.
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft
SUBFLOOR: 5/8" GLUED AND NAILED

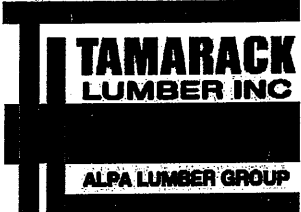
1st FLOOR

SITE COPY



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	12
J2	16-00-00	9 1/2" NI-40x	1	10
J2DJ	16-00-00	9 1/2" NI-40x	2	2
J3	14-00-00	9 1/2" NI-40x	1	33
J3DJ	14-00-00	9 1/2" NI-40x	2	12
J4	12-00-00	9 1/2" NI-40x	1	23
J5	10-00-00	9 1/2" NI-40x	1	9
J6	8-00-00	9 1/2" NI-40x	1	3
J7	6-00-00	9 1/2" NI-40x	1	1
J8	4-00-00	9 1/2" NI-40x	1	8
J9	2-00-00	9 1/2" NI-40x	1	6
B2	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B1	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B7	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B8L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B9L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B12L	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B4	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B10	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B11L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B3	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B6L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
32	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
9	H1	IUS2.56/9.5
2	H3	HUS1.81/10
2	H3	HUS1.81/10



FROM PLAN DATED: JAN 2018
BUILDER: BAYVIEW WELLINGTON
SITE: GREEN VALLEY EAST
MODEL: S38-8C BAROSSA 8C
ELEVATION: B
LOT:
CITY: BRADFORD
SALESMAN: M D
DESIGNER: CZ
REVISION:

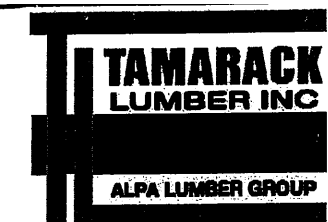
NOTES:
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2
S.P.F REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS. SEE
FIGURE 1. CANTILEVERED JOISTS
INCLUDING CANT' OVER BRICK REQ.
I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS.
SEE FIGURES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS.
FOR HOLES INCLUDING DUCT
CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7, TABLES 1 & 2.
CERAMIC TILE APPLICATION AS PER
O.B.C 9.30.6.
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft
SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

1st FLOOR

WOD. CONDITION

SITE COPY



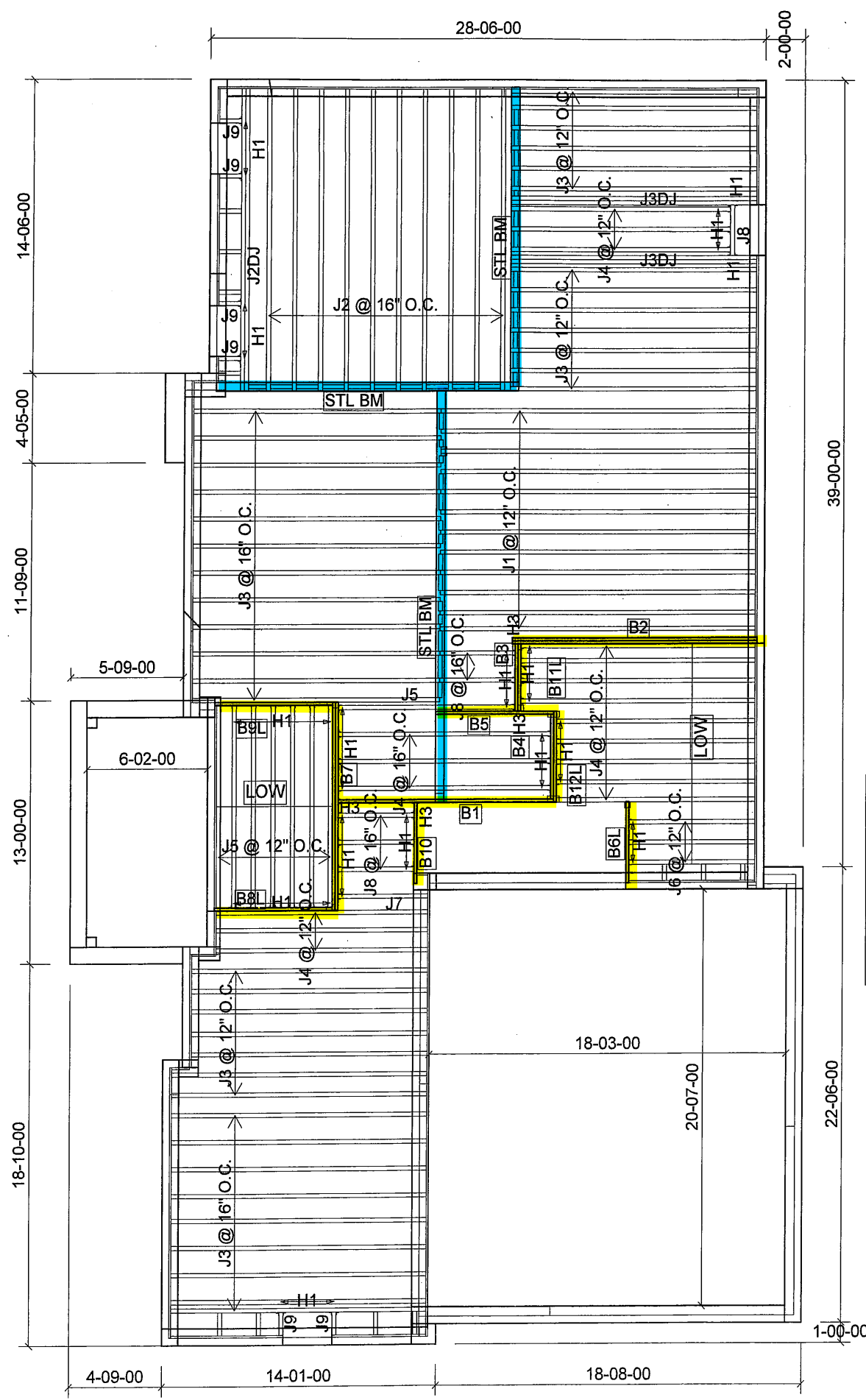
FROM PLAN DATED: JAN 2018
BUILDER: BAYVIEW WELLINGTON
SITE: GREEN VALLEY EAST
MODEL: S38-8C BAROSSA 8C
ELEVATION: C
LOT:
CITY: BRADFORD
SALESMAN: M D
DESIGNER: CZ
REVISION:

NOTES:
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2
S.P.F REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS. SEE
FIGURE 1. CANTILEVERED JOISTS
INCLUDING CANT' OVER BRICK REQ.
I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS.
SEE FIGURES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS.
FOR HOLES INCLUDING DUCT
CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7, TABLES 1 & 2.
CERAMIC TILE APPLICATION AS PER
O.B.C 9.30.6.
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft
SUBFLOOR: 5/8" GLUED AND NAILED

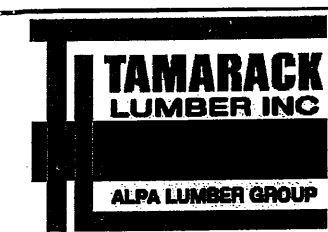
DATE: 21/02/2018
1st FLOOR
WOD. CONDITION

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	12
J2	16-00-00	9 1/2" NI-40x	1	10
J2DJ	16-00-00	9 1/2" NI-40x	2	2
J3	14-00-00	9 1/2" NI-40x	1	41
J3DJ	14-00-00	9 1/2" NI-40x	2	4
J4	12-00-00	9 1/2" NI-40x	1	18
J5	10-00-00	9 1/2" NI-40x	1	8
J6	8-00-00	9 1/2" NI-40x	1	3
J7	6-00-00	9 1/2" NI-40x	1	1
J8	4-00-00	9 1/2" NI-40x	1	6
J9	2-00-00	9 1/2" NI-40x	1	6
B2	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B1	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B7	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B8L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B9L	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B12L	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B4	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B10	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B11L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B3	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B6L	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
32	H1	IUS2.56/9.5
8	H1	IUS2.56/9.5
6	H1	IUS2.56/9.5
5	H1	IUS2.56/9.5
2	H3	HUS1.81/10
2	H3	HUS1.81/10



SITE COPY



FROM PLAN DATED: JAN 2017

BUILDER: BAYVIEW WELLINGTON

SITE: GREEN VALLEY EAST

MODEL: S38-8C BAROSSA 8C

ELEVATION: A

LOT:

CITY: BRADFORD

SALESMAN: M D

DESIGNER: CZ

REVISION:

NOTES:

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

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

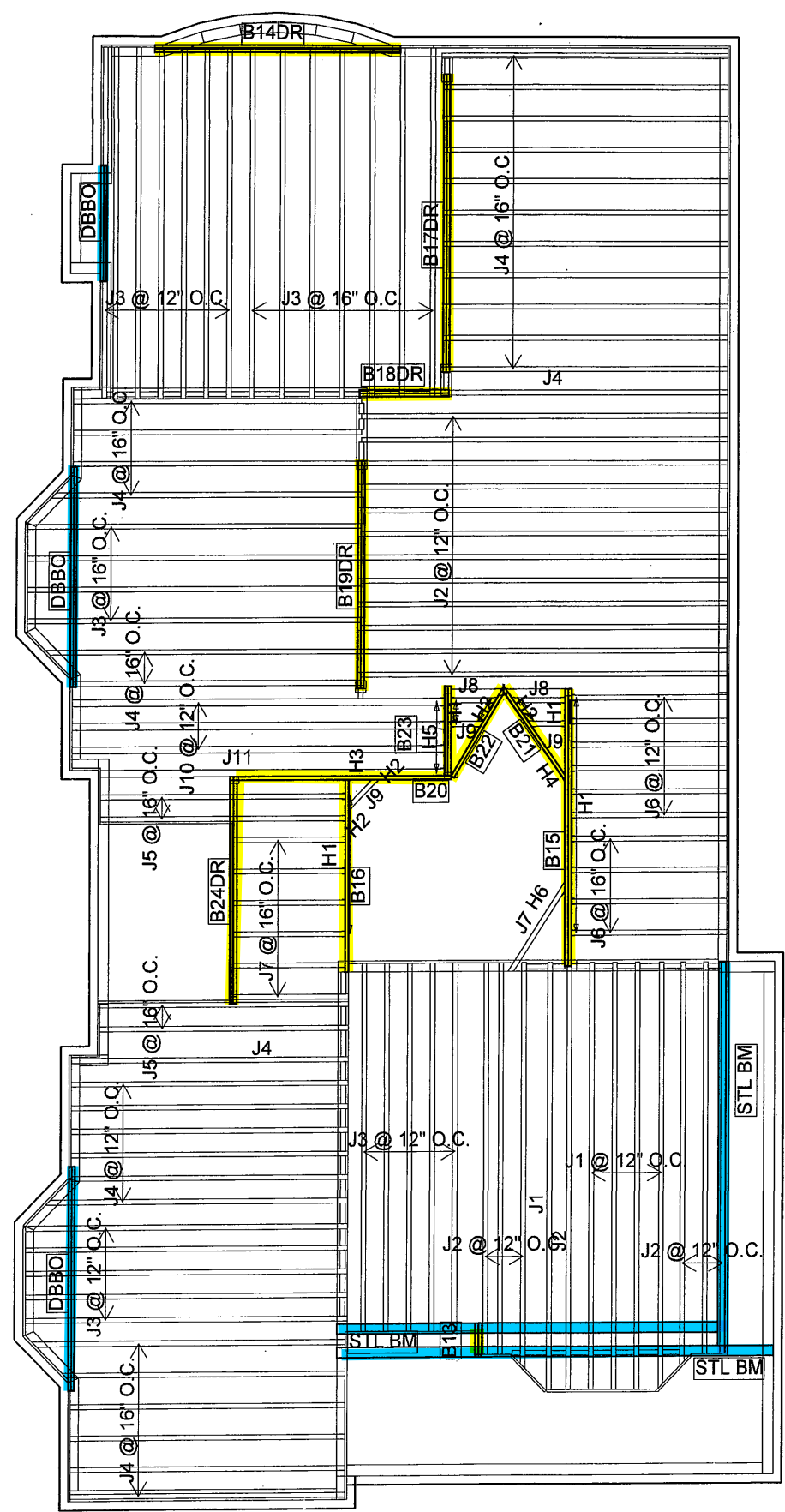
DEAD LOAD: 15.0 lb/ft

TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

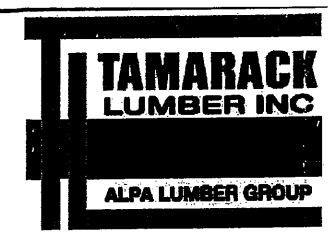
2nd FLOOR



Products				
PlotID	Length	Product	Plies	Net Qty
J1	20-00-00	9 1/2" NI-40x	1	5
J2	18-00-00	9 1/2" NI-40x	1	19
J3	16-00-00	9 1/2" NI-40x	1	28
J4	14-00-00	9 1/2" NI-40x	1	31
J5	12-00-00	9 1/2" NI-40x	1	4
J6	8-00-00	9 1/2" NI-40x	1	10
J7	6-00-00	9 1/2" NI-40x	1	7
J8	4-00-00	9 1/2" NI-40x	1	2
J9	2-00-00	9 1/2" NI-40x	1	3
J10	18-00-00	9 1/2" NI-80	1	3
J11	16-00-00	9 1/2" NI-80	1	1
B17DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B14DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B15	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B16	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B20	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B19DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B24DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B21	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B22	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B18DR	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B23	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B13	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
6	H1	IUS2.56/9.5
14	H1	IUS2.56/9.5
2	H2	LSSUH310
2	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H3	HUS1.81/10
1	H4	LS90
4	H5	IUS3.56/9.5
1	H6	LSSUH310

SITE COPY



FROM PLAN DATED: JAN 2018

BUILDER: BAYVIEW WELLINGTON

SITE: GREEN VALLEY EAST

MODEL: S38-8C BAROSSA 8C

ELEVATION: A

LOT:

CITY: BRADFORD

SALESMAN: M D

DESIGNER: CZ

REVISION:

NOTES:

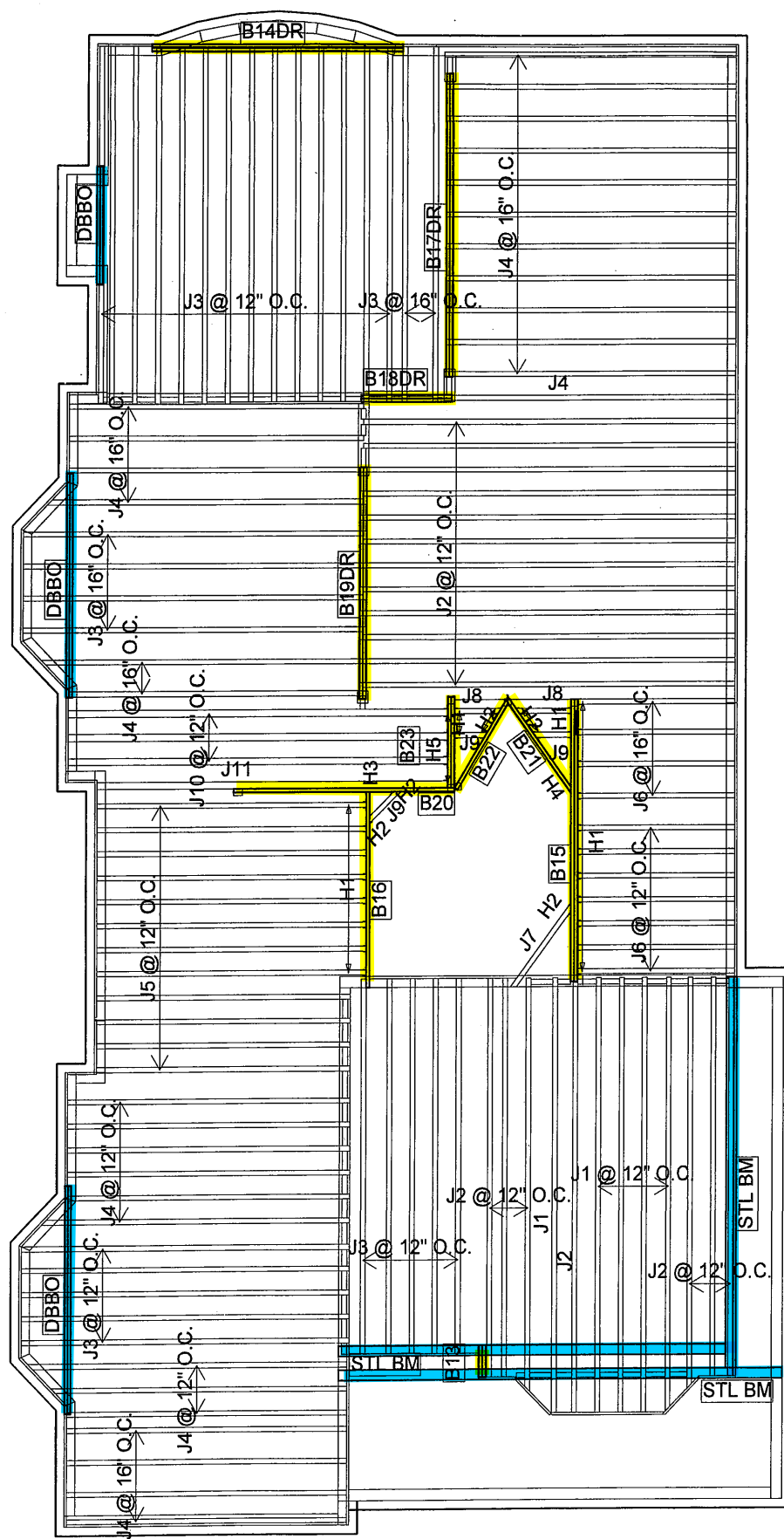
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2
S.P.F. REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS. SEE
FIGURE 1. CANTILEVERED JOISTS
INCLUDING CANT' OVER BRICK REQ.
I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS.
SEE FIGURE 7 TABLES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS.
FOR HOLES INCLUDING DUCT
CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7 TABLES 1 & 2 OF THE
INSTALLATION GUIDE. CERAMIC TILE
APPLICATION AS PER O.B.C. 9.30.6
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

2nd FLOOR

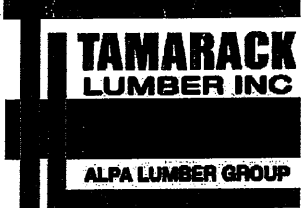
OPT. 5 BEDROOM



Products				
PlotID	Length	Product	Plies	Net Qty
J1	20-00-00	9 1/2" NI-40x	1	5
J2	18-00-00	9 1/2" NI-40x	1	19
J3	16-00-00	9 1/2" NI-40x	1	30
J4	14-00-00	9 1/2" NI-40x	1	31
J5	12-00-00	9 1/2" NI-40x	1	12
J6	8-00-00	9 1/2" NI-40x	1	11
J7	6-00-00	9 1/2" NI-40x	1	1
J8	4-00-00	9 1/2" NI-40x	1	2
J9	2-00-00	9 1/2" NI-40x	1	3
J10	18-00-00	9 1/2" NI-80	1	3
J11	16-00-00	9 1/2" NI-80	1	1
B17DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B14DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B15	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B16	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B20	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B19DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B21	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B22	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B18DR	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B23	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B13	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/9.5
15	H1	IUS2.56/9.5
2	H2	LSSUH310
2	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H3	HUS1.81/10
1	H4	LS90
4	H5	IUS3.56/9.5

SITE COPY



FROM PLAN DATED: JAN 2018

BUILDER: BAYVIEW WELLINGTON

SITE: GREEN VALLEY EAST

MODEL: S38-8C BAROSSA 8C

ELEVATION: B

LOT:

CITY: BRADFORD

SALESMAN: M D

DESIGNER: CZ

REVISION:

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

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

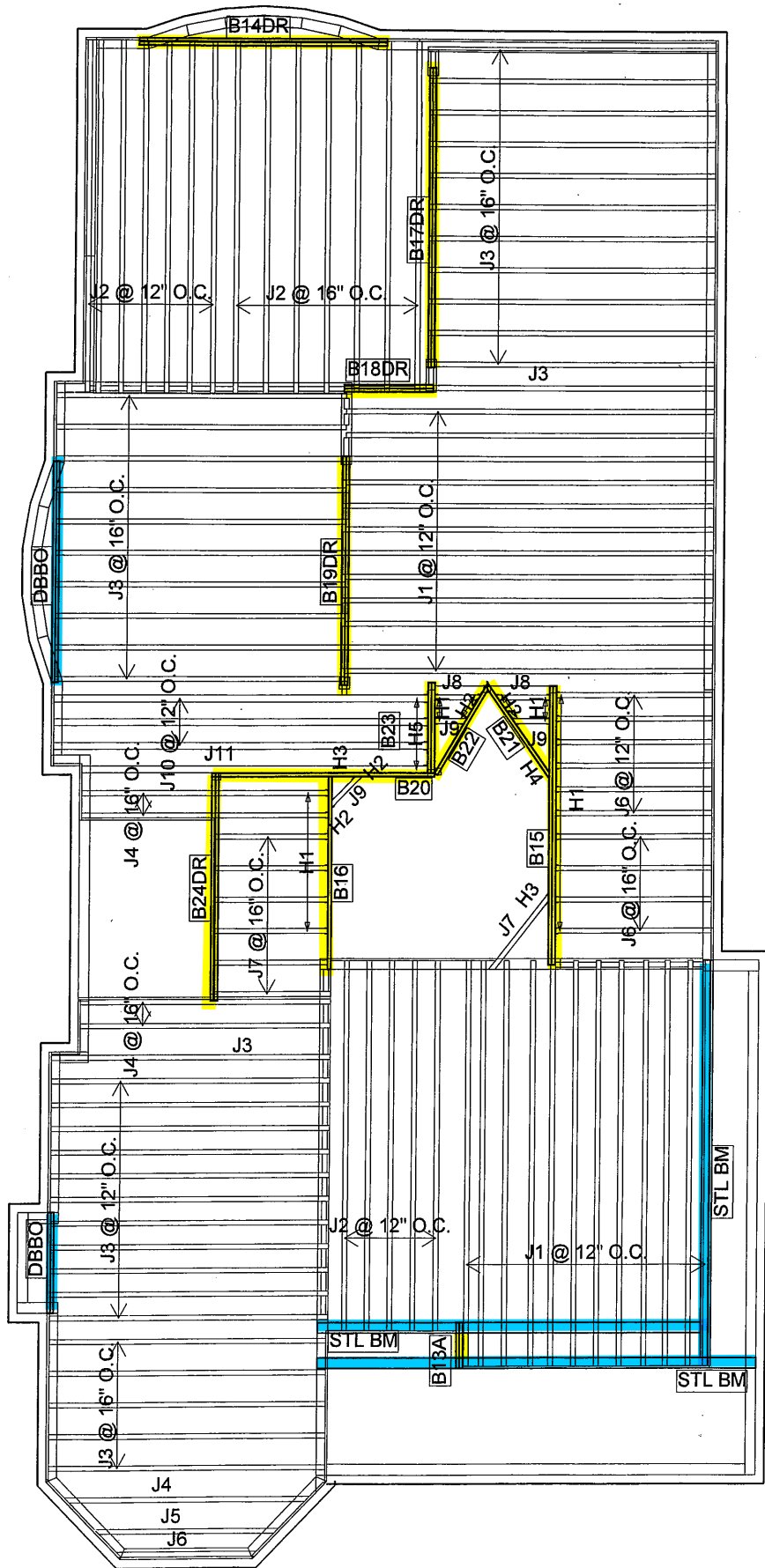
DEAD LOAD: 15.0 lb/ft

TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

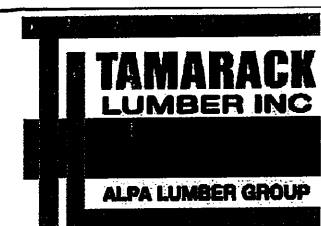
2nd FLOOR



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	24
J2	16-00-00	9 1/2" NI-40x	1	19
J3	14-00-00	9 1/2" NI-40x	1	39
J4	12-00-00	9 1/2" NI-40x	1	5
J5	10-00-00	9 1/2" NI-40x	1	1
J6	8-00-00	9 1/2" NI-40x	1	11
J7	6-00-00	9 1/2" NI-40x	1	7
J8	4-00-00	9 1/2" NI-40x	1	2
J9	2-00-00	9 1/2" NI-40x	1	3
J10	18-00-00	9 1/2" NI-80	1	3
J11	16-00-00	9 1/2" NI-80	1	1
B17DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B14DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B15	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B16	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B20	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B19DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B24DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B21	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B22	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B18DR	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B23	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B13A	2-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
6	H1	IUS2.56/9.5
14	H1	IUS2.56/9.5
2	H2	LSSUH310
2	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H3	HUS1.81/10
1	H3	LSSUH310
1	H4	LS90
4	H5	IUS3.56/9.5

SITE COPY



FROM PLAN DATED: JAN 2018

BUILDER: BAYVIEW WELLINGTON

SITE: GREEN VALLEY EAST

MODEL: S38-8C BAROSSA 8C

ELEVATION: B

LOT:

CITY: BRADFORD

SALESMAN: M D

DESIGNER: CZ

REVISION:

NOTES:

REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
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CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7 TABLES 1 & 2 OF THE
INSTALLATION GUIDE. CERAMIC TILE
APPLICATION AS PER O.B.C. 9.30.6
LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft

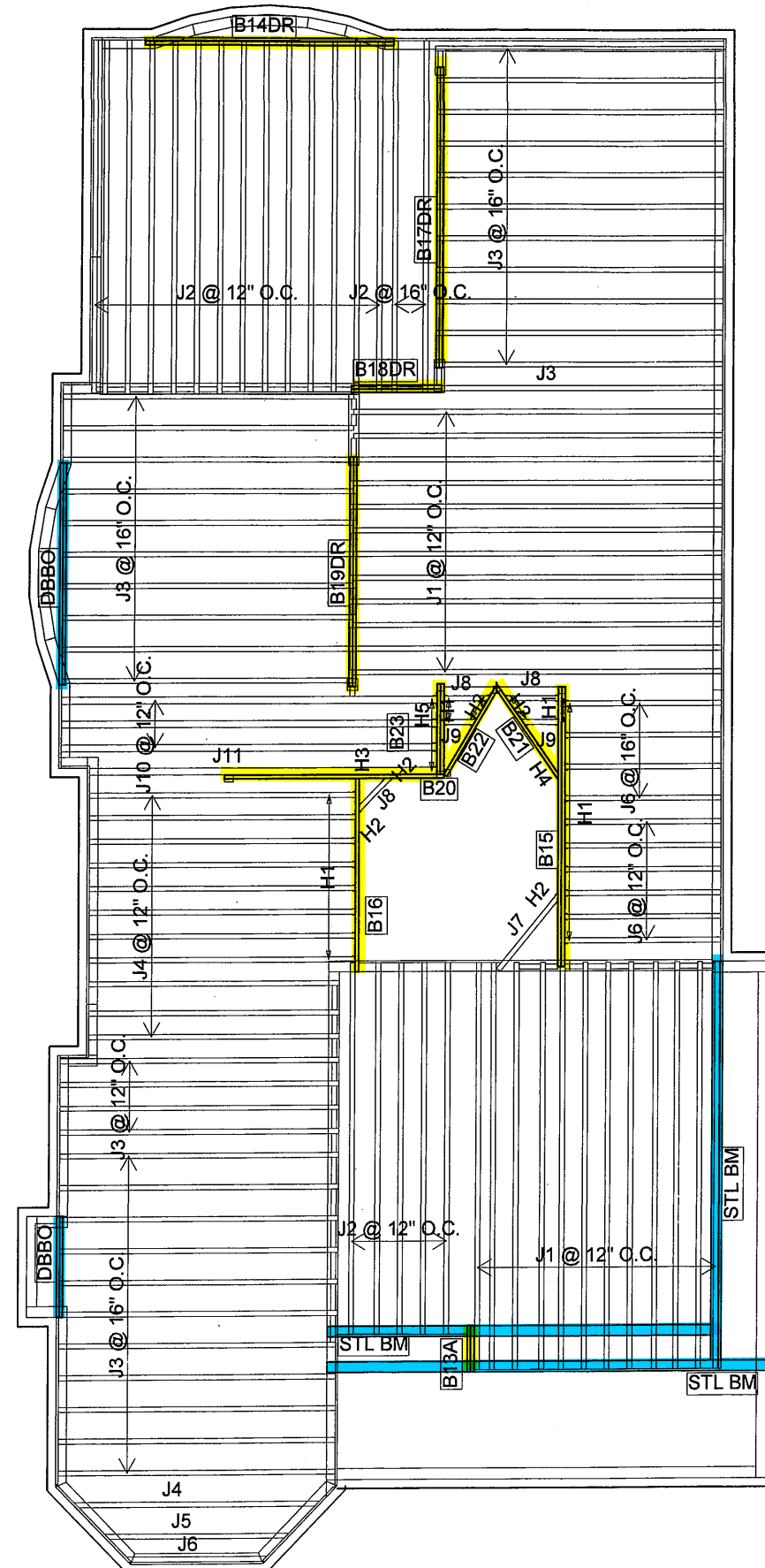
TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

2nd FLOOR

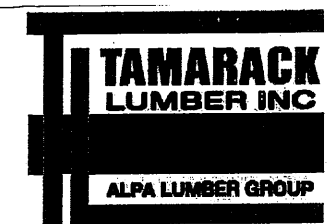
OPT. 5 BEDRM



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	24
J2	16-00-00	9 1/2" NI-40x	1	21
J3	14-00-00	9 1/2" NI-40x	1	37
J4	12-00-00	9 1/2" NI-40x	1	12
J5	10-00-00	9 1/2" NI-40x	1	1
J6	8-00-00	9 1/2" NI-40x	1	11
J7	6-00-00	9 1/2" NI-40x	1	1
J8	4-00-00	9 1/2" NI-40x	1	3
J9	2-00-00	9 1/2" NI-40x	1	2
J10	18-00-00	9 1/2" NI-80	1	3
J11	16-00-00	9 1/2" NI-80	1	1
B17DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B14DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B15	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B16	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B20	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B19DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B21	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B22	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B18DR	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B23	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B13A	2-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/9.5
14	H1	IUS2.56/9.5
2	H2	LSSUH310
2	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H3	HUS1.81/10
1	H4	LS90
4	H5	IUS3.56/9.5

SITE COPY



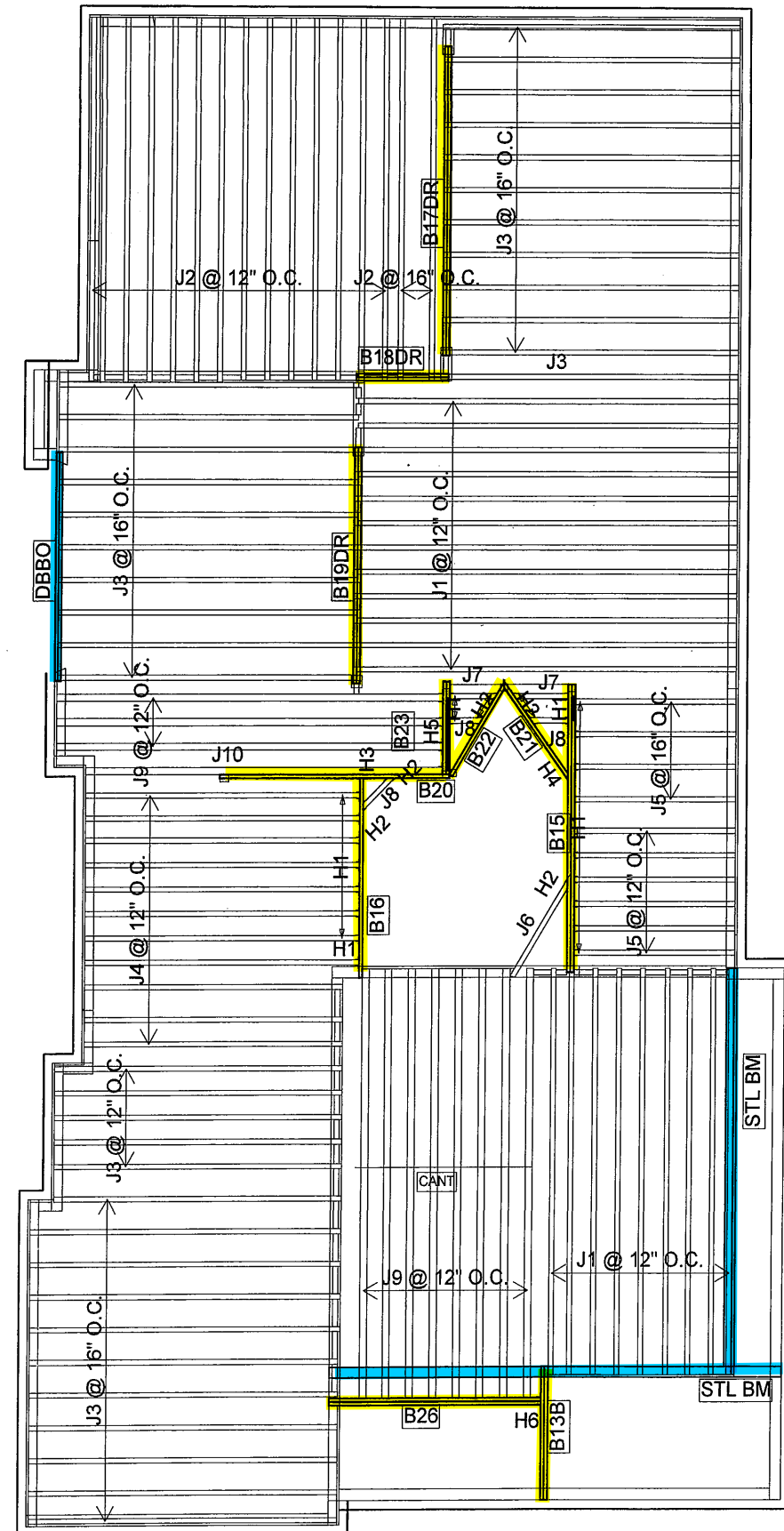
FROM PLAN DATED: JAN 2017
BUILDER: BAYVIEW WELLINGTON
SITE: GREEN VALLEY EAST
MODEL: S38-8C BAROSSA 8C
ELEVATION: C
LOT:
CITY: BRADFORD
SALESMAN: M.D
DESIGNER: CZ
REVISION:

NOTES:
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
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SEE FIGURE 7 TABLES 1 & 2 OF THE
INSTALLATION GUIDE. CERAMIC TILE
APPLICATION AS PER O.B.C. 9.30.6
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft
SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

2nd FLOOR

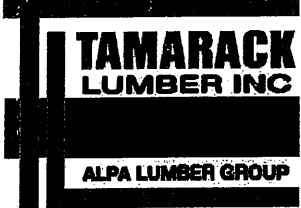
OPT 5 BEDRM



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	21
J2	16-00-00	9 1/2" NI-40x	1	16
J3	14-00-00	9 1/2" NI-40x	1	38
J4	12-00-00	9 1/2" NI-40x	1	11
J5	8-00-00	9 1/2" NI-40x	1	10
J6	6-00-00	9 1/2" NI-40x	1	1
J7	4-00-00	9 1/2" NI-40x	1	2
J8	2-00-00	9 1/2" NI-40x	1	3
J9	18-00-00	9 1/2" NI-80	1	11
J10	16-00-00	9 1/2" NI-80	1	1
B17DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B15	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B16	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B20	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B19DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B26	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B21	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B22	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B13B	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B18DR	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B23	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/9.5
14	H1	IUS2.56/9.5
2	H2	LSSUH310
2	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H3	HUS1.81/10
1	H4	LS90
4	H5	IUS3.56/9.5
1	H6	HGUS410

SITE COPY

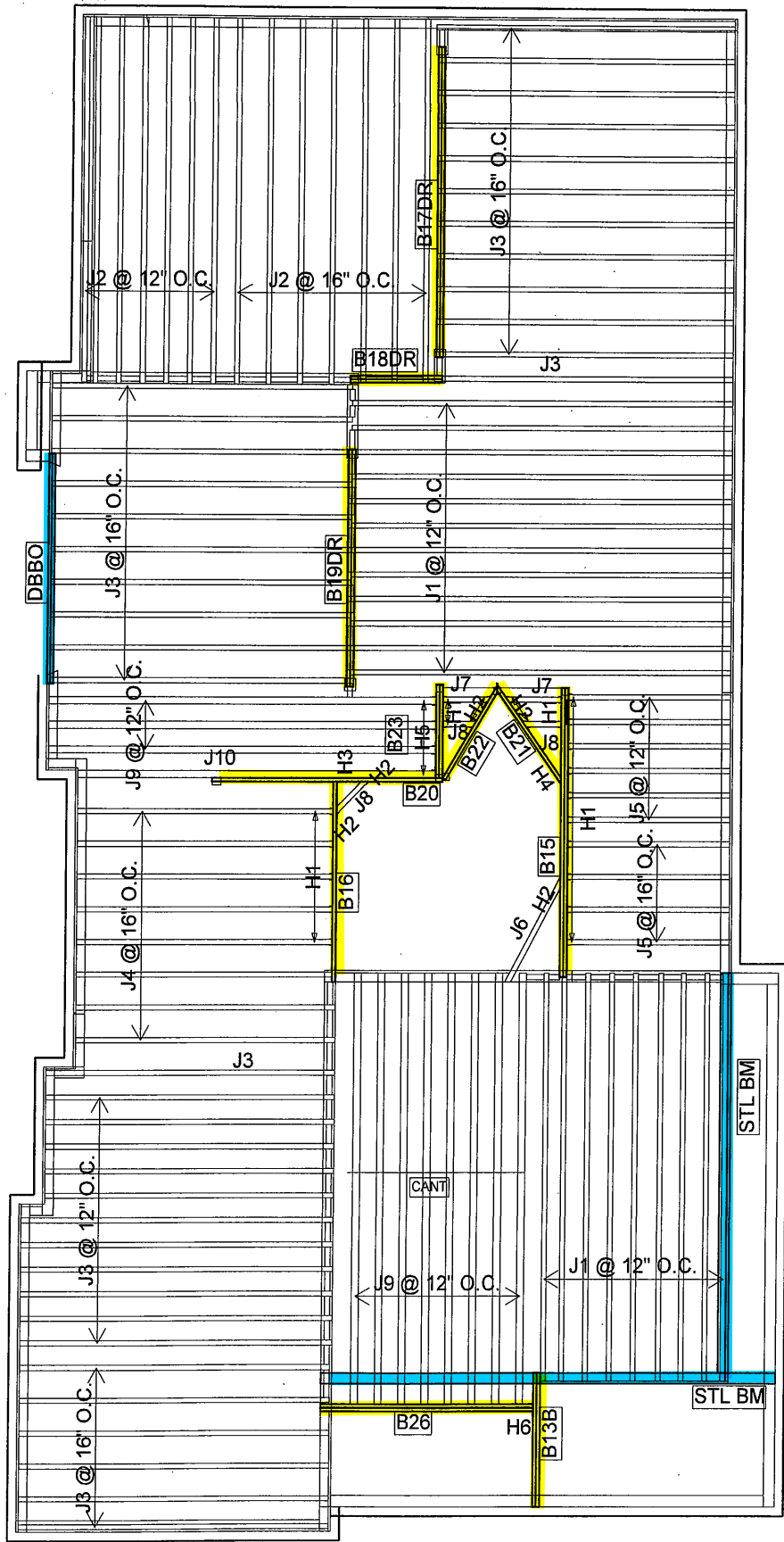


FROM PLAN DATED: JAN 2018
BUILDER: BAYVIEW WELLINGTON
SITE: GREEN VALLEY EAST
MODEL: S38-8C BAROSSA 8C
ELEVATION: C
LOT:
CITY: BRADFORD
SALESMAN: M D
DESIGNER: CZ
REVISION:

NOTES:
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LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft
SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 21/02/2018

2nd FLOOR



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-40x	1	21
J2	16-00-00	9 1/2" NI-40x	1	14
J3	14-00-00	9 1/2" NI-40x	1	40
J4	12-00-00	9 1/2" NI-40x	1	8
J5	8-00-00	9 1/2" NI-40x	1	10
J6	6-00-00	9 1/2" NI-40x	1	1
J7	4-00-00	9 1/2" NI-40x	1	2
J8	2-00-00	9 1/2" NI-40x	1	3
J9	18-00-00	9 1/2" NI-80	1	11
J10	16-00-00	9 1/2" NI-80	1	1
B17DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B15	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B16	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B20	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B19DR	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B26	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B21	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B22	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B13B	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B18DR	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B23	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
5	H1	IUS2.56/9.5
14	H1	IUS2.56/9.5
2	H2	LSSUH310
2	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H2	LSSUH310
1	H3	HUS1.81/10
1	H4	LS90
4	H5	IUS3.56/9.5
1	H6	HGUS410

SITE COPY

NORDIC STRUCTURES

COMPANY
TAMARACK LUMBER
3269 NORTH SERVICE ROAD
BURLINGTON, ON
by CZ
Sep. 21, 2017 09:37

PROJECT
J1-2ND FL.wwb

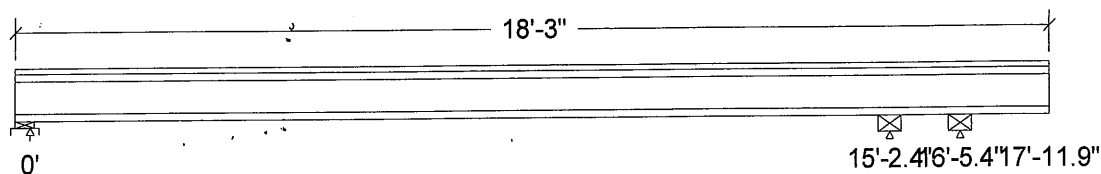
Design Check Calculation Sheet Nordic Sizer – Canada 6.4

Loads:

Load	Type	Distribution	Pat- tern	Location [ft] Start End	Magnitude Start End	Unit
Load1	Dead	Full Area	No		20.00	psf
Load2	Live	Full Area	Yes		40.00	psf
Load3	Dead	Point	No	18.17	130	lbs
Load4	Live	Point	Yes	18.17	33	lbs
Load5	Snow	Point	Yes	18.17	99	lbs
Load6	Snow	Point	Yes	18.17	99	lbs
Load7	Live	Point	Yes	18.17	33	lbs
Load8	Dead	Point	No	18.17	30	lbs

Load magnitude does not include Normal Importance factor from O86 Table 4.2.3.2, which is applied during analysis.

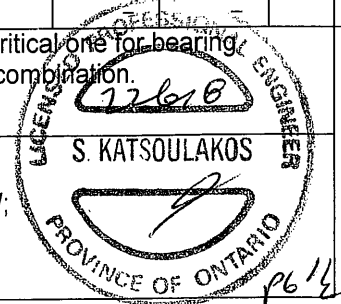
Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :



Unfactored:					
Dead	118		413	-10	
Live	234		1254	272	
Snow	1		-240	438	
Factored:					
Uplift				1294	
Total	498		2396	647	
Bearing:					
Resistance					
Joist	1893		4063	4063	
Support	7072		-	-	
Des ratio					
Joist	0.26		0.59	0.16	
Support	0.07		-	-	
Load case	#4		#12	#7	
Length	4		5	5	
Min req'd	1-3/4		3-1/2	3-1/2	
Stiffener	No		No	No	
Kd	1.00		1.00	1.00	
KB support	1.00		-	-	
fcp sup	769		-	-	
Kzcp sup	1.15		-	-	

Maximum reaction on at least one support is from a different load combination than the critical one for bearing design, shown here, due to Kd factor. See Analysis results for reaction from critical load combination.

Nordic 9-1/2" NI-40x Floor joist @ 12" o.c.
Supports: 1 - Lumber Sill plate, No.1/No.2; 2,3 - Steel Beam, W;
Total length: 18'-3.0"; 5/8" nailed and glued OSB sheathing
This section PASSES the design code check.



DWG NO. TAM 8426-18
STRUCTURAL
COMPONENT ONLY

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Limit States Design using CSA-O86-09 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 1602	Vr = 1895	lbs	Vf/Vr = 0.85
Moment (+)	Mf = 1461	Mr = 4824	lbs-ft	Mf/Mr = 0.30
Moment (-)	Mf = 2257	Mr = 4824	lbs-ft	Mf/Mr = 0.47
Deflection:				
Interior Perm	0.05 = <L/999	0.51 = L/360	in	0.10
Live	0.10 = <L/999	0.38 = L/480	in	0.25
Total	0.15 = <L/999	0.76 = L/240	in	0.19
Cantil. Perm	0.00 = <L/999	0.10 = L/180	in	0.03
Live	0.00 = <L/999	0.08 = L/240	in	0.06
Total	0.01 = <L/999	0.15 = L/120	in	0.05
Bare Defl'n	0.01 = <L/999	0.05 = L/360	in	0.11
Vibration	Lmax = 15'-2	Lv = 17'-8	ft	
Defl'n	= 0.027	= 0.043	in	0.62

Additional Data:

FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN	LC#
Vr	1895	1.00	1.00	-	-	-	-	-	#12
Mr+	4824	1.00	1.00	-	1.000	-	-	-	#4
Mr-	4824	1.00	1.00	-	1.000	-	-	-	#12
EI	218.1 million	-	-	-	-	-	-	-	#4

CRITICAL LOAD COMBINATIONS:

Shear : LC #12 = 1.25D + 1.5L (pattern: LL_)
 Moment (+) : LC #4 = 1.25D + 1.5L + (1.0)0.5S
 Moment (-) : LC #12 = 1.25D + 1.5L (pattern: LL_)
 Deflection: LC #1 = 1.0D (permanent)
 LC #4 = 1.0D + 1.0L + (0.9)0.5S (live)
 LC #4 = 1.0D + 1.0L + (0.9)0.5S (total)
 LC #4 = 1.0D + 1.0L + (0.9)0.5S (bare joist)
 Bearing : Support 1 - LC #4 = 1.25D + 1.5L + (1.0)0.5S
 Support 2 - LC #12 = 1.25D + 1.5L (pattern: LL_)
 Support 3 - LC #7 = 0.9D + (1.0)1.5S

Load Types: D=dead W=wind S=snow H=earth,groundwater E=earthquake
 L=live(use,occupancy) Ls=live(storage,equipment) f=fire

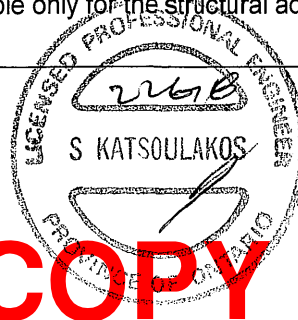
Load Patterns: s=S/2 L=L+Ls __=no pattern load in this span
 All Load Combinations (LCs) are listed in the Analysis output

CALCULATIONS:

Deflection: E_Ieff = 258e06 lb-in² K= 4.94e06 lbs
 "Live" deflection = Deflection from all non-dead loads (live, wind, snow...)

Design Notes:

1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-09 Engineering Design in Wood standard, which includes Update No.1. **CONFORMS TO OBC 2012**
2. Please verify that the default deflection limits are appropriate for your application.
3. Refer to technical documentation for installation guidelines and construction details.
4. Nordic I-joists are listed in CCMC evaluation report 13032-R.
5. Joists shall be laterally supported at supports and continuously along the compression edge.
6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.



DWG NO. TAM 8426 -R
 STRUCTURAL
 COMPONENT ONLY

SITE COPY

NORDIC STRUCTURES

COMPANY
TAMARACK LUMBER
3269 NORTH SERVICE ROAD
BURLINGTON, ON
by CZ
Sep. 19, 2017 14:29

PROJECT
J9-2ND FL ELC.wwb

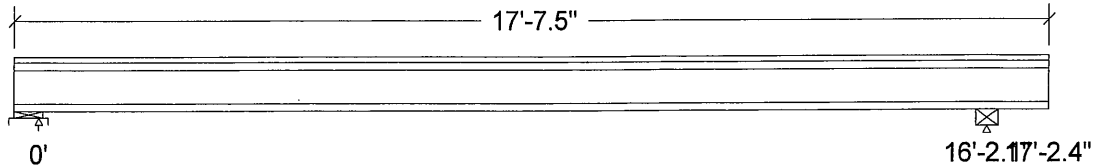
Design Check Calculation Sheet

Nordic Sizer – Canada 6.4

Loads:

Load	Type	Distribution	Pat- tern	Location [ft] Start End	Magnitude Start End	Unit
Load1	Dead	Full Area	No		20.00	psf
Load2	Live	Full Area	Yes		40.00	psf

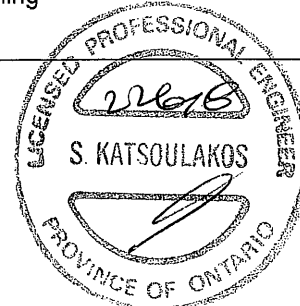
Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :



Unfactored:			
Dead	161		183
Live	324		366
Factored:			
Total	687		777
Bearing:			
Resistance			
Joist	1893		4025
Support	14851		-
Des ratio			
Joist	0.36		0.19
Support	0.05		-
Load case	#4		#2
Length	6		4-1/2
Min req'd	1-3/4		3-1/2
Stiffener	No		No
Kd	1.00		1.00
KB support	1.00		-
fcp sup	769		-
Kzcp sup	1.15		-

Maximum reaction on at least one support is from a different load combination than the critical one for bearing design, shown here, due to Kd factor. See Analysis results for reaction from critical load combination.

Nordic 9-1/2" NI-80 Floor joist @ 12" o.c.
Supports: 1 - Lumber Sill plate, No.1/No.2; 2 - Steel Beam, W;
Total length: 17'-7.5"; 5/8" nailed and glued OSB sheathing
This section PASSES the design code check.



SITE COPY

DWG NO. TAM 842
STRUCTURAL
COMPONENT ONLY

166
-18

Limit States Design using CSA-O86-09 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 690	Vr = 1895	lbs	Vf/Vr = 0.36
Moment (+)	Mf = 2774	Mr = 8958	lbs-ft	Mf/Mr = 0.31
Moment (-)	Mf = 44	Mr = 8958	lbs-ft	Mf/Mr = 0.00
Deflection:				
Interior Perm	0.10 = <L/999	0.54 = L/360	in	0.18
Live	0.19 = <L/999	0.40 = L/480	in	0.48
Total	0.29 = L/671	0.81 = L/240	in	0.36
Cantil. Perm	-0.02 = L/735	0.07 = L/180	in	0.24
Live	-0.03 = L/361	0.05 = L/240	in	0.66
Total	-0.05 = L/242	0.10 = L/120	in	0.50
Bare Defl'n	-0.04 = L/318	0.07 = L/180	in	0.56
Vibration	Lmax = 16'-2	Lv = 17'-5	ft	
Defl'n	= 0.031	= 0.040	in	0.79

Additional Data:

FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN	LC#
Vr	1895	1.00	1.00	-	-	-	-	-	#2
Mr+	8958	1.00	1.00	-	1.000	-	-	-	#4
Mr-	8958	1.00	1.00	-	1.000	-	-	-	#2
EI	324.1 million	-	-	-	-	-	-	-	#4

CRITICAL LOAD COMBINATIONS:

Shear : LC #2 = 1.25D + 1.5L
 Moment (+) : LC #4 = 1.25D + 1.5L (pattern: L₋)
 Moment (-) : LC #2 = 1.25D + 1.5L
 Deflection: LC #1 = 1.0D (permanent)
 LC #4 = 1.0D + 1.0L (pattern: L₋) (live)
 LC #4 = 1.0D + 1.0L (pattern: L₋) (total)
 LC #4 = 1.0D + 1.0L (pattern: L₋) (bare joist)

Bearing : Support 1 - LC #2 = 1.25D + 1.5L
 Support 2 - LC #0 = 1.4D

Load Types: D=dead W=wind S=snow H=earth,groundwater E=earthquake
 L=live(use,occupancy) Ls=live(storage,equipment) f=fire

Load Patterns: s=S/2 L=L+Ls _=no pattern load in this span
 All Load Combinations (LCs) are listed in the Analysis output

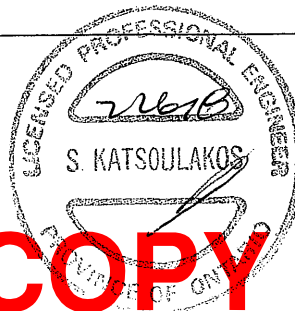
CALCULATIONS:

Deflection: E_Ieff = 367e06 lb-in² K= 4.94e06 lbs
 "Live" deflection = Deflection from all non-dead loads (live, wind, snow...)

Design Notes:

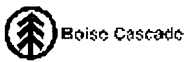
- WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-09 Engineering Design in Wood standard, which includes Update No.1.
- Please verify that the default deflection limits are appropriate for your application.
- Refer to technical documentation for installation guidelines and construction details.
- Nordic I-joists are listed in CCMC evaluation report 13032-R.
- Joists shall be laterally supported at supports and continuously along the compression edge.
- The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.

CONFORMS TO OBC 2012



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DWG NO. TAM B40 -18
 STRUCTURAL
 COMPONENT ONLY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B1(i7014)

BC CALC® Design Report



Dry | 2 spans | No cantilevers | 0/12 slope (deg)

September 19, 2017 09:04:09

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports:

CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

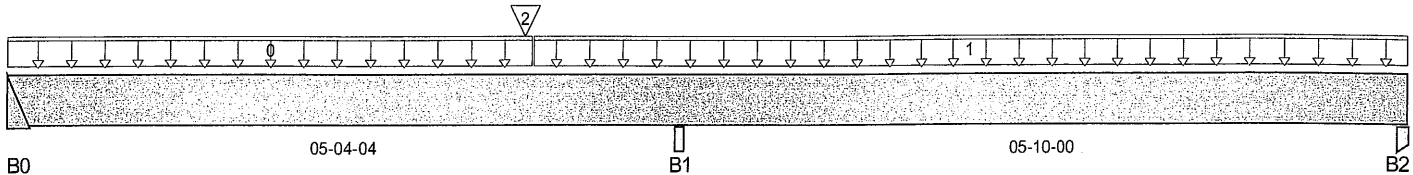
Description: Designs\Flush Beams\Basement\Flush Beams\B1(i7014)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 11-02-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	151 / 5	74 / 0		
B1, 5-1/4"	624 / 0	322 / 0		
B2, 3-1/2"	38 / 47	4 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	04-02-04	27	10			n/a
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	04-02-04	11-02-04	14	5			n/a
2	B10(i7071)	Conc. Pt. (lbs)	L	04-01-06	04-01-06	549	267			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	782 ft-lbs	12,704 ft-lbs	6.2%	2	04-01-06
Neg. Moment	-628 ft-lbs	-12,704 ft-lbs	4.9%	1	05-04-04
End Shear	263 lbs	5,785 lbs	4.5%	2	00-11-08
Cont. Shear	1,097 lbs	5,785 lbs	19%	1	04-04-02
Uplift	67 lbs	n/a	n/a	5	11-02-04
Total Load Defl.	L/999 (0.009")	n/a	n/a	9	02-11-03
Live Load Defl.	L/999 (0.006")	n/a	n/a	12	02-11-03
Total Neg. Defl.	L/999 (-0.005")	n/a	n/a	9	07-07-13
Max Defl.	0.009"	n/a	n/a	9	02-11-03
Span / Depth	7.1	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	319 lbs	n/a	7.5%	HUS1.81/10
B1 Beam	5-1/4" x 1-3/4"	1,338 lbs	27.3%	11.9%	Unspecified
B2 Post	3-1/2" x 1-3/4"	67 lbs	1.4%	0.9%	Unspecified

Cautions

Uplift of 67 lbs found at span 2 - Right. (SIMPSON 1-HRST @ 11. B2)

Notes



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Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B1(i7014)

Dry | 2 spans | No cantilevers | 0/12 slope (deg)

September 19, 2017 09:04:09

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1(i7014)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B2(i8857)

BC CALC® Design Report



Dry | 2 spans | Left cantilever | 0/12 slope (deg)

September 21, 2017 09:26:36

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports:

CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL A OPT.mmdl

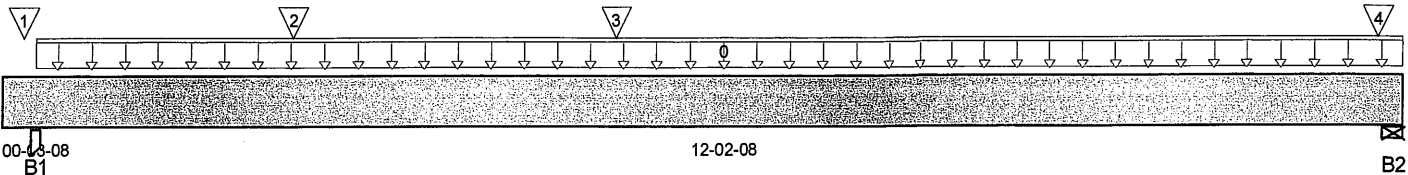
Description: Designs\Flush Beams\Basement\Flush Beams\B2(i8857)

Specifier:

Designer: CZ

Company:

Misc:

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

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	2,520 / 0	1,635 / 0		
B2, 5-1/2"	869 / 12	637 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	12-06-00	31	12			n/a
1	-	Conc. Pt. (lbs)	L	00-02-02	00-02-02	1,237	625			n/a
2	PBO20(i725)	Conc. Pt. (lbs)	L	02-06-15	02-06-15	637	537			n/a
3	H1(i724)	Conc. Pt. (lbs)	L	05-05-04	05-05-04	1,002	778			n/a
4	E29(i660)	Conc. Pt. (lbs)	L	12-03-04	12-03-04	115	67			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	10,485 ft-lbs	25,408 ft-lbs	41.3%	3	05-05-04
Neg. Moment	-303 ft-lbs	-25,408 ft-lbs	1.2%	1	00-03-08
End Shear	1,753 lbs	11,571 lbs	15.1%	3	11-03-00
Cont. Shear	3,096 lbs	11,571 lbs	26.8%	1	01-02-12
Total Load Defl.	L/433 (0.327")	0.591"	55.4%	10	05-09-10
Live Load Defl.	L/765 (0.185")	0.394"	47.1%	13	05-09-10
Total Neg. Defl.	2xL/1,998 (-0.027")	n/a	n/a	10	00-00-00
Max Defl.	0.327"	1"	32.7%	10	05-09-10
Cant. Max Defl.	-0.027"	n/a	n/a	10	00-00-00
Span / Depth	14.9	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B1 Post	3-1/2" x 3-1/2"	5,824 lbs	58.6%	39%	Unspecified
B2 Wall/Plate	5-1/2" x 3-1/2"	2,100 lbs	20.4%	8.9%	Unspecified

Notes**SITE COPY**



Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B2(i8857)

Dry | 2 spans | Left cantilever | 0/12 slope (deg)

September 21, 2017 09:26:36

BC CALC® Design Report

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL A OPT.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B2(i8857)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets arbitrary (1") Cantilever Maximum total load deflection criteria.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

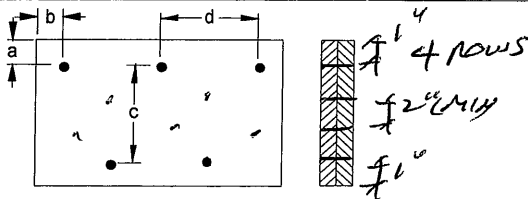
Importance Factor: Normal Part code: Part 9

Cantilevers require sheathed bottom flanges, blocking at cantilever support and closure at ends.

CONFORMS TO OBC 2012**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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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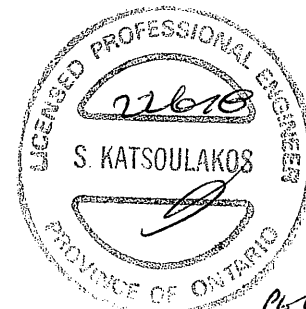
Connection Diagram

a minimum = 3" c = 1-1/2"
b minimum = 3" d = 4"

Calculated Side Load = 94.3 lb/ft

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

Connectors are: Nails

3-1/2" ARDOX SPIRAL

DWG NO. TAM B429-18
STRUCTURAL
COMPONENT ONLY

SITE COPY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B3(i8286)

BC CALC® Design Report



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

September 20, 2017 16:28:34

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL A.mmdl

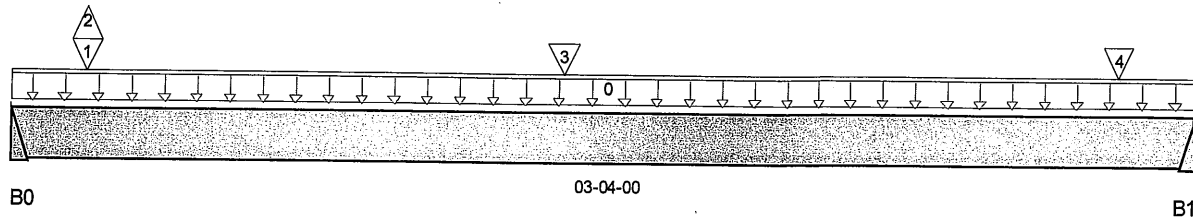
Description: Designs\Flush Beams\Basement\Flush Beams\B3(i8286)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 03-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	531 / 17	251 / 0		
B1	758 / 1	367 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-00	03-04-00	240	120			n/a
1	J5(i8203)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	60	16			n/a
2	J5(i8203)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	-18				n/a
3	J8(i8217)	Conc. Pt. (lbs)	L	01-06-08	01-06-08	107	40			n/a
4	-	Conc. Pt. (lbs)	L	03-01-06	03-01-06	322	146			n/a

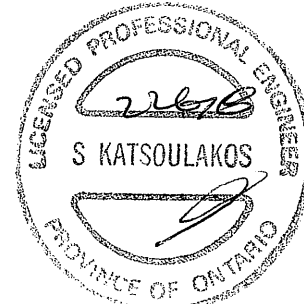
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	838 ft-lbs	12,704 ft-lbs	6.6%	1	01-06-08
End Shear	533 lbs	5,785 lbs	9.2%	1	02-04-08
Total Load Defl.	L/999 (0.004")	n/a	n/a	6	01-08-01
Live Load Defl.	L/999 (0.003")	n/a	n/a	8	01-08-01
Max Defl.	0.004"	n/a	n/a	6	01-08-01
Span / Depth	3.9	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	1,110 lbs	n/a	26%	HUS1.81/10
B1 Hanger	2" x 1-3/4"	1,596 lbs	n/a	37.4%	HUS1.81/10

Notes



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Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B3(i8286)

BC CALC® Design Report



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

September 20, 2017 16:28:34

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL Ammdl

Description: Designs\Flush Beams\Basement\Flush Beams\B3(i8286)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

Disclosure

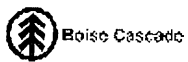
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance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

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DWG NO. TAM 0430-18
STRUCTURAL
COMPONENT ONLY

SITE COPY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B4(i7017)

BC CALC® Design Report



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

September 19, 2017 09:04:10

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

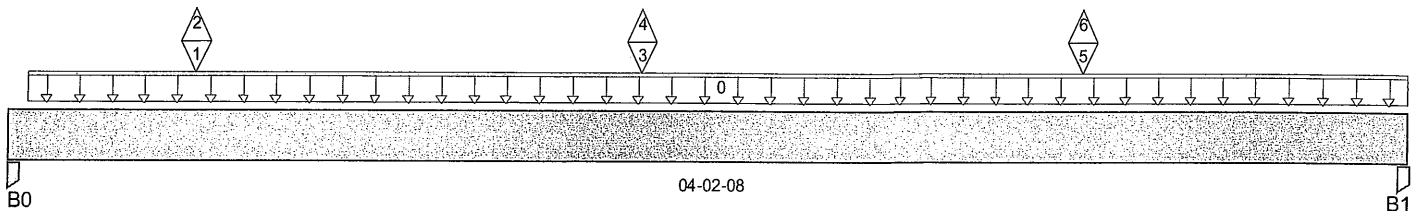
Description: Designs\Flush Beams\Basement\Flush Beams\B4(i7017)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 04-02-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	200 / 23	199 / 0		
B1, 1-3/4"	174 / 21	194 / 0		

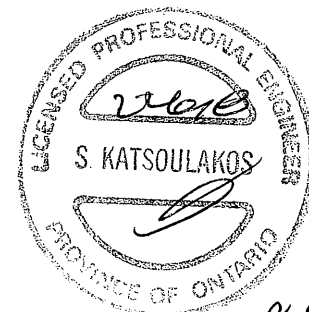
Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-11	04-02-08	60				n/a
1	J4(i7106)	Conc. Pt. (lbs)	L	00-06-12	00-06-12	107	36			n/a
2	J4(i7106)	Conc. Pt. (lbs)	L	00-06-12	00-06-12	-12				n/a
3	J4(i6974)	Conc. Pt. (lbs)	L	01-10-12	01-10-12	140	46			n/a
4	J4(i6974)	Conc. Pt. (lbs)	L	01-10-12	01-10-12	-16				n/a
5	J4(i6954)	Conc. Pt. (lbs)	L	03-02-12	03-02-12	127	42			n/a
6	J4(i6954)	Conc. Pt. (lbs)	L	03-02-12	03-02-12	-16				n/a

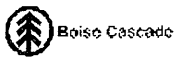
Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	583 ft-lbs	12,704 ft-lbs	4.6%	1	01-10-12
End Shear	428 lbs	5,785 lbs	7.4%	1	03-03-04
Total Load Defl.	L/999 (0.005")	n/a	n/a	6	02-01-04
Live Load Defl.	L/999 (0.002")	n/a	n/a	8	02-01-04
Max Defl.	0.005"	n/a	n/a	6	02-01-04
Span / Depth	5.1	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-3/4" x 1-3/4"	549 lbs	22.1%	14.7%	Unspecified
B1 Post	1-3/4" x 1-3/4"	504 lbs	20.3%	13.5%	Unspecified

Notes



SITE COPY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B4(i7017)

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

September 19, 2017 09:04:10

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B4(i7017)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM 8431
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B5(i6938)

BC CALC® Design Report



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

September 19, 2017 09:04:10

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

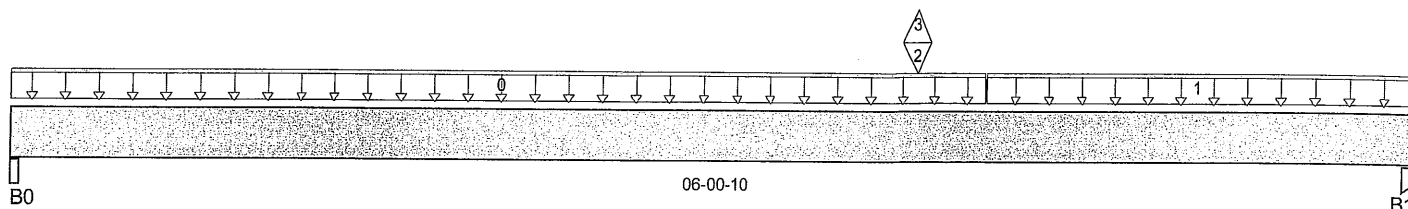
Description: Designs\Flush Beams\Basement\Flush Beams\B5(i6938)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 06-00-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/4"	790 / 10	428 / 0		
B1, 3-1/2"	1,370 / 20	745 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	04-02-10	27	10			n/a
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	04-02-10	06-00-10	22	8			n/a
2	-	Conc. Pt. (lbs)	L	03-10-13	03-10-13	2,006	1,086			n/a
3	-	Conc. Pt. (lbs)	L	03-10-13	03-10-13	-30				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,238 ft-lbs	12,704 ft-lbs	41.2%	1	03-07-12
End Shear	2,932 lbs	5,785 lbs	50.7%	1	04-11-10
Total Load Defl.	L/999 (0.067")	n/a	n/a	6	03-03-03
Live Load Defl.	L/999 (0.043")	n/a	n/a	8	03-03-03
Max Defl.	0.067"	n/a	n/a	6	03-03-03
Span / Depth	6.9	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Beam	5-1/4" x 1-3/4"	1,719 lbs	35%	15.3%	Unspecified
B1 Post	3-1/2" x 1-3/4"	2,987 lbs	60%	40%	Unspecified

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012



SITE COPY

DWG NO. TAM 8432-18
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B5(i6938)

BC CALC® Design Report



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

September 19, 2017 09:04:10

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B5(i6938)

Specifier:

Designer: CZ

Company:

Misc:

Disclosure

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SITE COPY



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B6L(i6558)

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

September 19, 2017 09:04:08

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code:BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

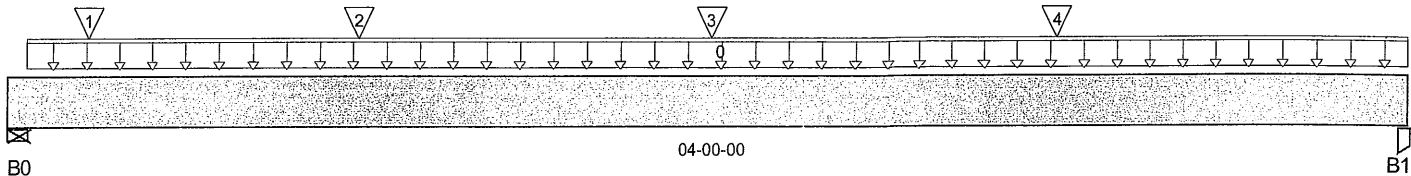
Description: Designs\Flush Beams\Basment\Flush Beams\B6L(i6558

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 04-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	692 / 0	345 / 0		
B1, 3-1/2"	649 / 0	310 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-10	04-00-00	240	120			n/a
1	3(i669)	Conc. Pt. (lbs)	L	00-02-12	00-02-12		15			n/a
2	J6(i6550)	Conc. Pt. (lbs)	L	01-00-00	01-00-00	129	48			n/a
3	J6(i6542)	Conc. Pt. (lbs)	L	02-00-00	02-00-00	129	48			n/a
4	J6(i6535)	Conc. Pt. (lbs)	L	03-00-00	03-00-00	136	51			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,125 ft-lbs	12,704 ft-lbs	8.9%	1	02-00-00
End Shear	775 lbs	5,785 lbs	13.4%	1	02-11-00
Total Load Defl.	L/999 (0.006")	n/a	n/a	4	02-01-01
Live Load Defl.	L/999 (0.004")	n/a	n/a	5	02-01-01
Max Defl.	0.006"	n/a	n/a	4	02-01-01
Span / Depth	4.3	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-1/2" x 1-3/4"	1,469 lbs	28.6%	12.5%	Unspecified
B1 Post	3-1/2" x 1-3/4"	1,362 lbs	27.4%	18.2%	Unspecified

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.
 Design meets User specified (0.75") Maximum live load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012



SITE COPY

DWG NO. TAM 8433.18
 STRUCTURAL
 COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B6L(i6558)

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

September 19, 2017 09:04:08

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B6L(i65.

Specifier:

Designer: CZ

Company:

Misc:

Disclosure

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Boise Cascade

Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B7(i8561)

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

September 20, 2017 16:52:26

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL Ammdl

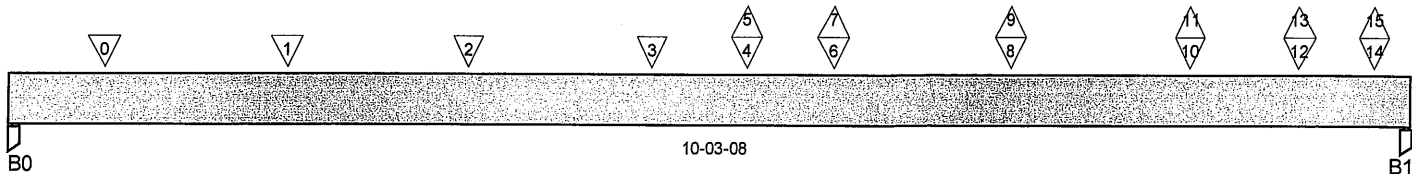
Description: Designs\Flush Beams\Basement\Flush Beams\B7(i8561)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 10-03-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	546 / 19	265 / 0		
B1, 3-1/2"	1,446 / 60	728 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	J7(i8543)	Conc. Pt. (lbs)	L	00-08-04	00-08-04	104	39			n/a
1	J8(i8666)	Conc. Pt. (lbs)	L	02-00-04	02-00-04	119	45			n/a
2	J8(i8674)	Conc. Pt. (lbs)	L	03-04-04	03-04-04	119	45			n/a
3	J8(i8602)	Conc. Pt. (lbs)	L	04-08-04	04-08-04	91	34			n/a
4	B1(i8579)	Conc. Pt. (lbs)	L	05-04-10	05-04-10	149	72			n/a
5	B1(i8579)	Conc. Pt. (lbs)	L	05-04-10	05-04-10	-6				n/a
6	J4(i8712)	Conc. Pt. (lbs)	L	06-00-04	06-00-04	102	32			n/a
7	J4(i8712)	Conc. Pt. (lbs)	L	06-00-04	06-00-04	-17				n/a
8	J4(i8596)	Conc. Pt. (lbs)	L	07-04-04	07-04-04	138	44			n/a
9	J4(i8596)	Conc. Pt. (lbs)	L	07-04-04	07-04-04	-22				n/a
10	J4(i8662)	Conc. Pt. (lbs)	L	08-08-04	08-08-04	135	43			n/a
11	J4(i8662)	Conc. Pt. (lbs)	L	08-08-04	08-08-04	-19				n/a
12	PBO14(i718)	Conc. Pt. (lbs)	L	09-05-12	09-05-12	951	510			n/a
13	PBO14(i718)	Conc. Pt. (lbs)	L	09-05-12	09-05-12	-10				n/a
14	J5(i8610)	Conc. Pt. (lbs)	L	10-00-04	10-00-04	84	30			n/a
15	J5(i8610)	Conc. Pt. (lbs)	L	10-00-04	10-00-04	-5				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,567 ft-lbs	25,408 ft-lbs	14%	1	05-04-10
End Shear	2,197 lbs	11,571 lbs	19%	1	09-02-08
Total Load Defl.	L/999 (0.089")	n/a	n/a	6	05-02-08
Live Load Defl.	L/999 (0.06")	n/a	n/a	8	05-02-08
Max Defl.	0.089"	n/a	n/a	6	05-02-08
Span / Depth	12.6	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-3/4" x 3-1/2"	1,150 lbs	23.1%	15.4%	Unspecified
B1 Post	3-1/2" x 3-1/2"	3,080 lbs	31%	20.6%	Unspecified

Notes

Page 1 of 2



DWG NO. TAM B434-R
STRUCTURAL
COMPONENT ONLY

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Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement/Flush Beams/B7(i8561)

BC CALC® Design Report



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

September 20, 2017 16:52:26

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports:

CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL A.mmdl

Description: Designs/Flush Beams/Basement/Flush Beams/B7(i856

Specifier:

Designer: CZ

Company:

Msc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

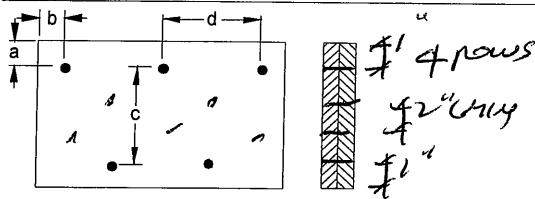
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

Connection Diagram



a minimum = 1" c = 1-1/2"
b minimum = 3" d = 6"

Calculated Side Load = 188.3 lb/ft

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

Connectors are: 3-1/2" ARDOX SPIRAL Nails

3-1/2" ARDOX SPIRAL

Disclosure

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Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B8L(i7088)

BC CALC® Design Report



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

September 19, 2017 09:04:08

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports:

CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

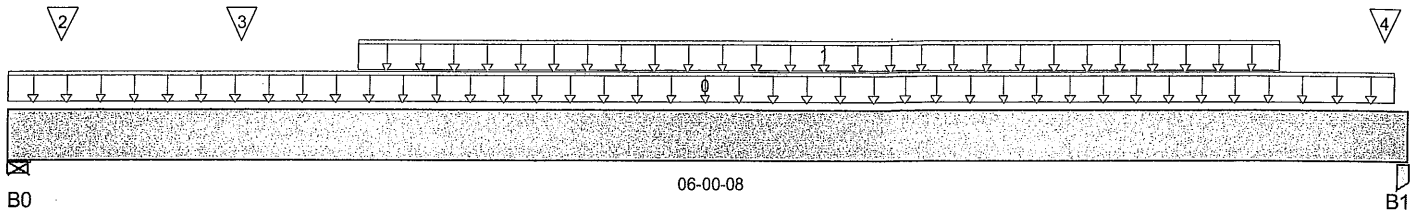
Description: Designs\Flush Beams\Basement\Flush Beams\B8L(i7088

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 06-00-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	511 / 0	404 / 0		
B1, 3-1/2"	619 / 0	424 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-00	05-11-13		60			n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-06-00	05-06-00	207	78			n/a
2	E8(i662)	Conc. Pt. (lbs)	L	00-02-12	00-02-12		20			n/a
3	J5(i6372)	Conc. Pt. (lbs)	L	01-00-00	01-00-00	185	70			n/a
4	J5(i6377)	Conc. Pt. (lbs)	L	05-11-04	05-11-04	107	40			n/a

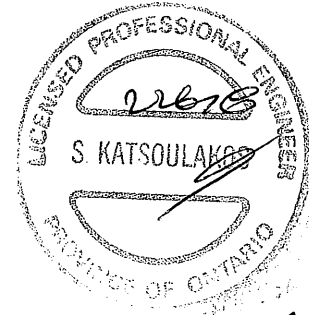
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,916 ft-lbs	12,704 ft-lbs	15.1%	1	03-00-00
End Shear	1,143 lbs	5,785 lbs	19.7%	1	04-11-08
Total Load Defl.	L/999 (0.03")	n/a	n/a	4	03-00-00
Live Load Defl.	L/999 (0.018")	n/a	n/a	5	03-00-00
Max Defl.	0.03"	n/a	n/a	4	03-00-00
Span / Depth	7.1	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 1-3/4"	1,272 lbs	38.9%	17%	Unspecified
B1 Post	3-1/2" x 1-3/4"	1,458 lbs	29.3%	19.5%	Unspecified

Notes





Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B8L(i7088)

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

September 19, 2017 09:04:08

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B8L(i70.

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012**Disclosure**

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DWG NO. TAM B435-18
STRUCTURAL
COMPONENT ONLY

BC CALC® Design Report



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

September 19, 2017 09:04:09

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

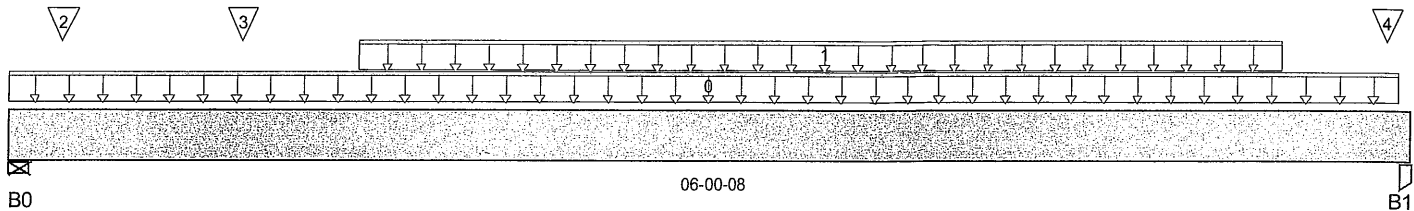
Description: Designs\Flush Beams\Basement\Flush Beams\B9L(i7007

Specifier:

Designer: CZ

Company:

Msc:



Total Horizontal Product Length = 06-00-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	574 / 0	449 / 0		
B1, 3-1/2"	619 / 0	425 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-00	05-11-15		60			n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-06-00	05-06-00	207	78			n/a
2	E8(i662)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	73	65			n/a
3	J5(i6372)	Conc. Pt. (lbs)	L	01-00-00	01-00-00	185	70			n/a
4	J5(i6377)	Conc. Pt. (lbs)	L	05-11-04	05-11-04	107	40			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,916 ft-lbs	12,704 ft-lbs	15.1%	1	03-00-00
End Shear	1,143 lbs	5,785 lbs	19.7%	1	04-11-08
Total Load Defl.	L/999 (0.03")	n/a	n/a	4	03-00-00
Live Load Defl.	L/999 (0.018")	n/a	n/a	5	03-00-00
Max Defl.	0.03"	n/a	n/a	4	03-00-00
Span / Depth	7.1	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"	1,423 lbs	43.5%	19% Unspecified
B1	Post	3-1/2" x 1-3/4"	1,459 lbs	29.3%	19.5% Unspecified

Notes





Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B9L(i7007)

BC CALC® Design Report



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

September 19, 2017 09:04:09

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B9L(i7007)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012**Disclosure**

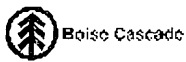
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance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

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DWG NO. TAM 8436
STRUCTURAL
COMPONENT ONLY

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Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B10(i7071)

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

September 19, 2017 09:04:09

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

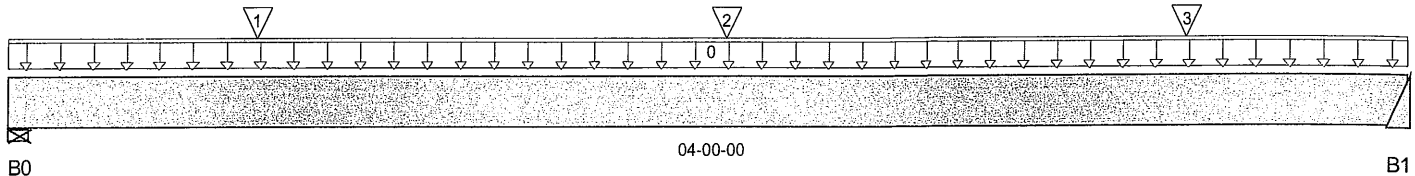
Description: Designs\Flush Beams\Basement\Flush Beams\B10(i7071

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 04-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 6"	701 / 0	338 / 0		
B1	578 / 0	280 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-00	04-00-00	240	120			n/a
1	J7(i7105)	Conc. Pt. (lbs)	L	00-08-08	00-08-08	114	43			n/a
2	J7(i7075)	Conc. Pt. (lbs)	L	02-00-08	02-00-08	116	43			n/a
3	J7(i7044)	Conc. Pt. (lbs)	L	03-04-08	03-04-08	88	33			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,038 ft-lbs	12,704 ft-lbs	8.2%	1	02-00-08
End Shear	649 lbs	5,785 lbs	11.2%	1	03-00-08
Total Load Defl.	L/999 (0.006")	n/a	n/a	4	02-02-00
Live Load Defl.	L/999 (0.004")	n/a	n/a	5	02-02-00
Max Defl.	0.006"	n/a	n/a	4	02-02-00
Span / Depth	4.4	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	6" x 1-3/4"	1,474 lbs	9.9%	11.5%	Unspecified
B1 Hanger	2" x 1-3/4"	1,217 lbs	n/a	28.5%	HUS1.81/10

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

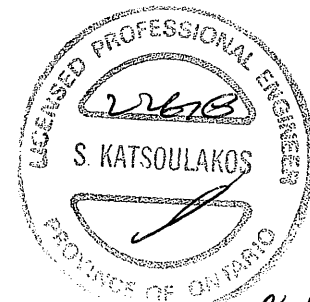
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012



P6 1/2

SITE COPY

DWG NO. TAM 8437-18
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B10(i7071)

BC CALC® Design Report



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

September 19, 2017 09:04:09

Build 5033

Job Name:

Address:

City, Province, Postal Code:BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B10(i70

Specifier:

Designer: CZ

Company:

Msc:

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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM 0437.18
STRUCTURAL
COMPONENT ONLY

P624



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basement\...\B11L(i6485)

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

September 19, 2017 09:04:10

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

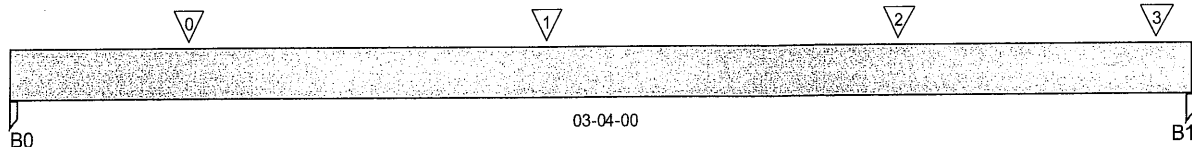
Description: Designs\Flush Beams\Basement\Flush Beams\B11L(i648

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 03-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	396 / 0	157 / 0		
B1, 3-1/2"	401 / 0	158 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	J4(i6503)	Conc. Pt. (lbs)	L	00-06-00	00-06-00	239	90			n/a
1	J4(i6521)	Conc. Pt. (lbs)	L	01-06-00	01-06-00	239	90			n/a
2	J4(i6533)	Conc. Pt. (lbs)	L	02-06-00	02-06-00	219	82			n/a
3	J4(i6526)	Conc. Pt. (lbs)	L	03-02-12	03-02-12	100	37			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	527 ft-lbs	12,704 ft-lbs	4.1%	1	01-06-00
End Shear	460 lbs	5,785 lbs	8%	1	02-03-00
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	01-07-11
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	01-07-11
Max Defl.	0.002"	n/a	n/a	4	01-07-11
Span / Depth	3.6	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	790 lbs	15.9%	10.6%	Unspecified
B1 Post	3-1/2" x 1-3/4"	799 lbs	16.1%	10.7%	Unspecified

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.
 Design meets User specified (0.75") Maximum live load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

Disclosure

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BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

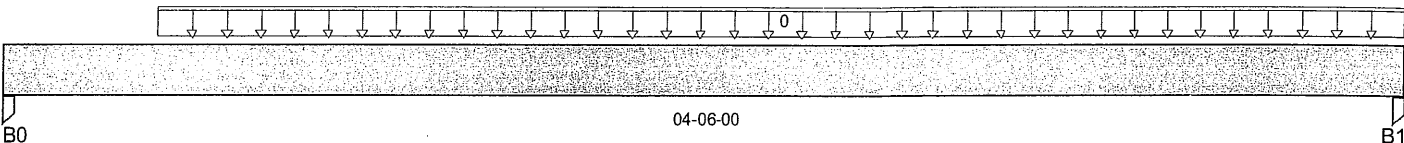
Description: Designs\Flush Beams\Basment\Flush Beams\B12L(i649

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 04-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	352 / 0	142 / 0		
B1, 3-1/2"	455 / 0	181 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 Smoothed Load	Unf. Lin. (lb/ft)	L	00-06-00	04-06-00	202	76			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	848 ft-lbs	12,704 ft-lbs	6.7%	1	02-00-00
End Shear	658 lbs	5,785 lbs	11.4%	1	01-01-00
Total Load Defl.	L/999 (0.007")	n/a	n/a	4	02-03-00
Live Load Defl.	L/999 (0.005")	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

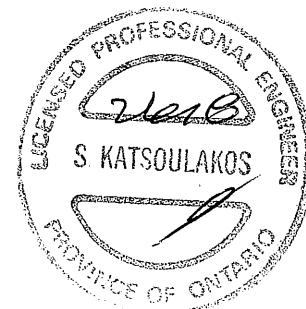
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Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	706 lbs	14.2%	9.5%	Unspecified
B1 Post	3-1/2" x 1-3/4"	909 lbs	18.3%	12.2%	Unspecified

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.
 Design meets User specified (0.75") Maximum live load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012


 DWG NO. TAM 8439-18
 STRUCTURAL
 COMPONENT ONLY



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

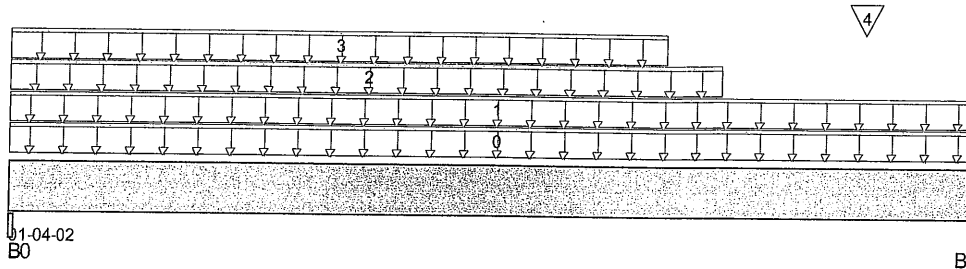
Description: Designs\Flush Beams\1st Floor\Flush Beams\B13(i6903)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 01-04-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-1/8"	49 / 0	109 / 0		
B1, 5-1/4"	249 / 0	280 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
0	low roof	Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	11	10		33	n/a
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	6				n/a
2	0	Unf. Lin. (lb/ft)	L	00-00-00	00-11-14	55	150		165	n/a
3	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	00-10-14	6				n/a
4	User Load	Conc. Pt. (lbs)	L	01-02-04	01-02-04	215	209		643	n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	14 ft-lbs	n/a	n/a	0	00-07-08
End Shear	69 lbs	7,521 lbs	0.9%	0	00-04-02
Span / Depth	0.9	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Beam	4-1/8" x 3-1/2"	152 lbs	3%	1.3%	Unspecified
B1 Beam	5-1/4" x 3-1/2"	723 lbs	7.4%	3.2%	Unspecified

Notes

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B13(i6903)

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

September 19, 2017 09:04:07

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B13(i6903)

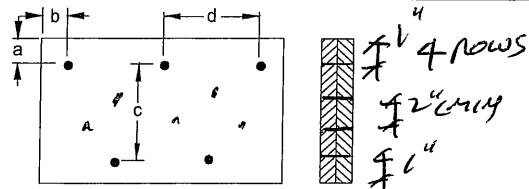
Specifier:

Designer: CZ

Company:

Misc:

Connection Diagram



a minimum = 1" c = 1 1/2"
b minimum = 3" d = 4"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
Member has no side loads.

Connectors are: 16d Spike Nails

3-1/2" ARDOX SPIRAL

Disclosure

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Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor...\B13B(i9483)

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

September 19, 2017 15:04:56

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B13B(i948

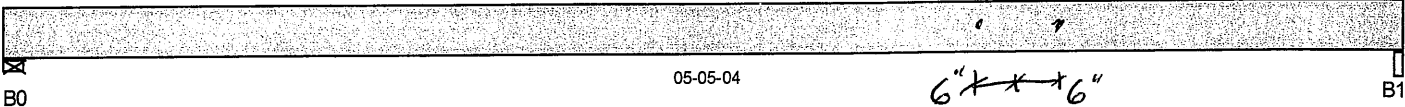
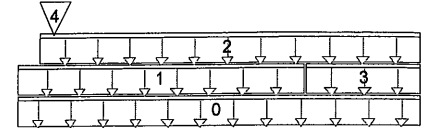
Specifier:

Designer: CZ

Company:

Misc:

2-1/2" Q A307 BOLTS c/w
WASHERS / NUTS.



Total Horizontal Product Length = 05-05-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	120 / 0	254 / 0	353 / 0	
B1, 5-1/4"	472 / 0	947 / 0	1,346 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	ROOF	Unf. Lin. (lb/ft)	L	03-10-08	05-05-04	33	130	99		n/a
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	03-10-08	05-00-00	15				n/a
2	LOWROOF	Unf. Lin. (lb/ft)	L	03-11-09	05-05-04	11	10	33		n/a
3	FC4 Floor Material	Unf. Lin. (lb/ft)	L	05-00-00	05-05-04	18				n/a
4	B26(i9458)	Conc. Pt. (lbs)	L	04-00-04	04-00-04	499	919	1,496		n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,187 ft-lbs	24,393 ft-lbs	13.1%	13	04-00-04
End Shear	2,919 lbs	11,571 lbs	25.2%	13	04-02-08
Total Load Defl.	L/999 (0.014")	n/a	n/a	45	03-00-10
Live Load Defl.	L/999 (0.009")	n/a	n/a	61	03-00-10
Max Defl.	0.014"	n/a	n/a	45	03-00-10
Span / Depth	5.9	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-1/2" x 3-1/2"	907 lbs	8.8%	3.9%	Unspecified
B1 Beam	5-1/4" x 3-1/2"	3,439 lbs	35%	15.3%	Unspecified

Notes



p616

SITE COPY

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B13B(i9

Specifier:

Designer: CZ

Company:

Misc:

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

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

Calculations assume unbraced length of Top: 03-05-00, Bottom: 03-05-00.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

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

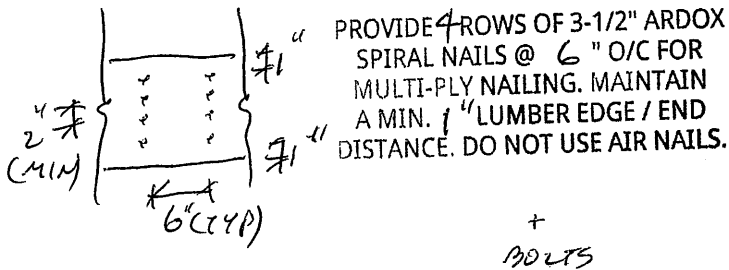
Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Connection Diagram

Concentrated side-load exceeds allowable magnitude for connection design. Please consult a technical representative or Professional Engineer for the design of the connection.

OK with
NAILING
+
BOLTING



Disclosure

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per



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B14(i6697)

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

September 19, 2017 09:04:08

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code:BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

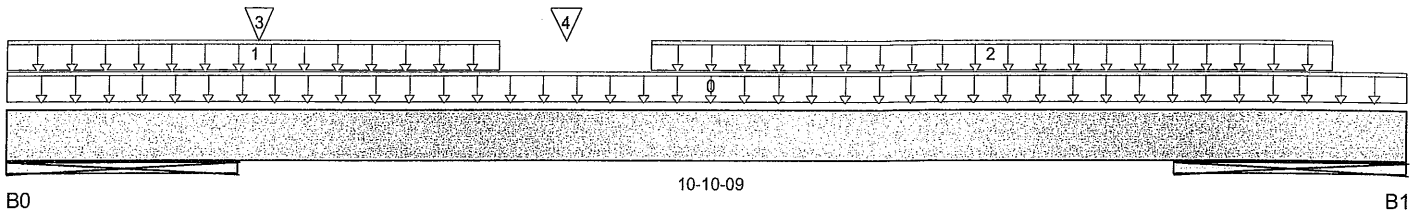
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B14(

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 10-10-09

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 21-9/16"	1,942 / 0	924 / 0		
B1, 21-9/16"	1,641 / 0	765 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	LOW ROOF	Unf. Lin. (lb/ft)	L	00-00-00	10-10-09	33	30		99	n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-00	03-09-12	315	118			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	04-11-12	10-03-12	300	112			n/a
3	User Load	Conc. Pt. (lbs)	L	01-11-04	01-11-04	74	75		223	n/a
4	J3(i6681)	Conc. Pt. (lbs)	L	04-03-12	04-03-12	350	131			n/a

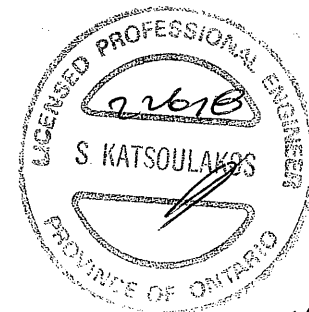
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,841 ft-lbs	25,408 ft-lbs	19.1%	1	05-07-12
End Shear	2,350 lbs	11,571 lbs	20.3%	1	08-03-08
Total Load Defl.	L/999 (0.067")	n/a	n/a	4	05-04-12
Live Load Defl.	L/999 (0.046")	n/a	n/a	5	05-05-12
Max Defl.	0.067"	n/a	n/a	4	05-04-12
Span / Depth	9.4	n/a	n/a		00-00-00
Distributed Load(B0)	99 lb/ft	57,645 lb/ft	0.2%	0	n/a
Distributed Load(B1)	99 lb/ft	57,645 lb/ft	0.2%	0	n/a
Concentrated Load(B0)	591 lbs	16,813 lbs	3.5%	0	n/a
Concentrated Load(B1)	787 lbs	16,813 lbs	4.7%	0	n/a

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0	Wall/Plate	21-9/16" x 3-1/2" 4,069 lbs	6.6%	4.4%	Unspecified
B1	Wall/Plate	21-9/16" x 3-1/2" 3,417 lbs	5.6%	3.7%	Unspecified

Notes



SITE COPY

DWG NO. TAM B442-18
STRUCTURAL
COMPONENT ONLY

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B1

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

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

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

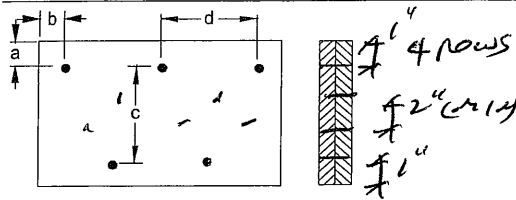
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

Connection Diagram



a minimum = 1" c = 1-1/2"
b minimum = 3" d = 4"

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

Member has no side loads.

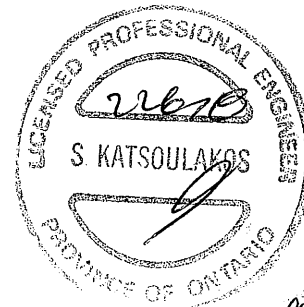
Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

Disclosure

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Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

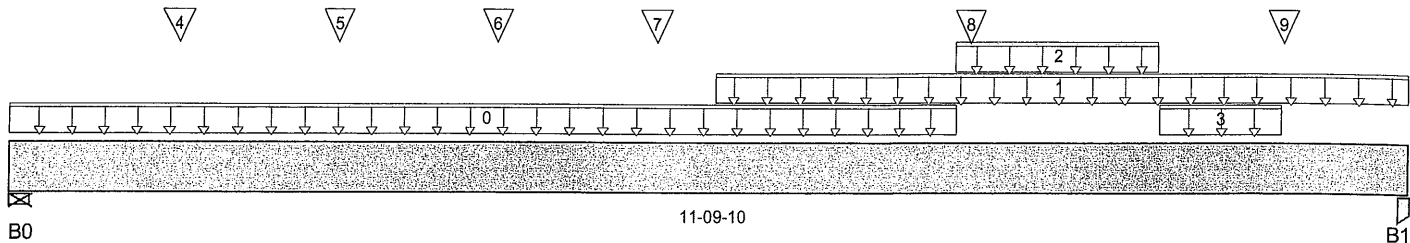
Description: Designs\Flush Beams\1st Floor\Flush Beams\B15(i6790)

Specifier:

Designer: CZ

Company:

Msc:



Total Horizontal Product Length = 11-09-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/8"	816 / 0	728 / 0		
B1, 3-1/2"	973 / 0	687 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-00	08-00-03		60			n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	05-11-02	11-09-10	140	52			n/a
2	FC4 Floor Material	Unf. Lin. (lb/ft)	L	07-11-15	09-08-10	4				n/a
3	FC4 Floor Material	Unf. Lin. (lb/ft)	L	09-08-10	10-09-02	58				n/a
4	J6(i6723)	Conc. Pt. (lbs)	L	01-05-02	01-05-02	261	98			n/a
5	J6(i6771)	Conc. Pt. (lbs)	L	02-09-02	02-09-02	190	71			n/a
6	J6(i6651)	Conc. Pt. (lbs)	L	04-01-02	04-01-02	190	71			n/a
7	J6(i6792)	Conc. Pt. (lbs)	L	05-05-02	05-05-02	166	62			n/a
8	B21(i6649)	Conc. Pt. (lbs)	L	08-01-05	08-01-05	41	166			n/a
9	J9(i6780)	Conc. Pt. (lbs)	L	10-09-02	10-09-02	54	20			n/a

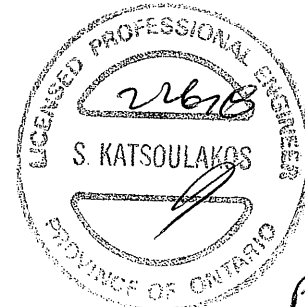
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	6,356 ft-lbs	25,408 ft-lbs	25%	1	06-02-02
End Shear	2,061 lbs	11,571 lbs	17.8%	1	10-08-10
Total Load Defl.	L/636 (0.215")	0.569"	37.7%	4	05-11-02
Live Load Defl.	L/999 (0.116")	n/a	n/a	5	05-11-02
Max Defl.	0.215"	1"	21.5%	4	05-11-02
Span / Depth	14.4	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	3-1/8" x 3-1/2"	2,134 lbs	36.4%	15.9%
B1	Post	3-1/2" x 3-1/2"	2,319 lbs	23.3%	15.5%

Notes





Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B15(i6790)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

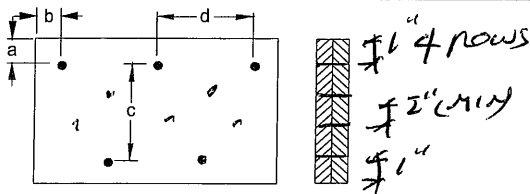
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012

Connection Diagram



a minimum = 1" c = 1-1/2"
b minimum = 3" d = 6"

Calculated Side Load = 272.1 lb/ft

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

Connectors are: 16d ³/₈" x Nails

3-1/2" ARDOX SPIRAL

Disclosure

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Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B16(i6696)

BC CALC® Design Report



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

September 19, 2017 09:04:07

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports:

CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

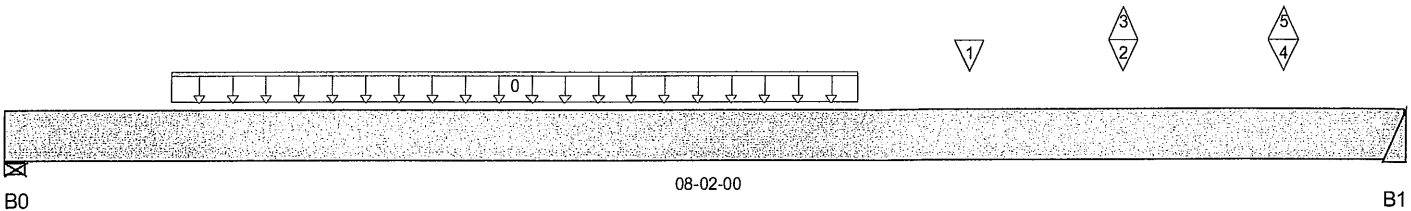
Description: Designs\Flush Beams\1st Floor\Flush Beams\B16(i6696)

Specifier:

Designer: CZ

Company:

Misc:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	337 / 3	146 / 0		
B1	360 / 22	146 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	00-11-08	04-11-08	103	38			n/a
1	J7(i6798)	Conc. Pt. (lbs)	L	05-07-08	05-07-08	116	43			n/a
2	J5(i6736)	Conc. Pt. (lbs)	L	06-06-06	06-06-06	86	29			n/a
3	J5(i6736)	Conc. Pt. (lbs)	L	06-06-06	06-06-06	-9				n/a
4	J5(i6843)	Conc. Pt. (lbs)	L	07-05-10	07-05-10	80	24			n/a
5	J5(i6843)	Conc. Pt. (lbs)	L	07-05-10	07-05-10	-16				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,528 ft-lbs	12,704 ft-lbs	12%	1	04-03-08
End Shear	676 lbs	5,785 lbs	11.7%	1	01-03-00
Total Load Defl.	L/999 (0.044")	n/a	n/a	6	04-02-08
Live Load Defl.	L/999 (0.031")	n/a	n/a	8	04-02-08
Max Defl.	0.044"	n/a	n/a	6	04-02-08
Span / Depth	9.7	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-1/2" x 1-3/4"	688 lbs	13.4%	5.9%	Unspecified
B1 Hanger	2" x 1-3/4"	722 lbs	n/a	16.9%	HUS1.81/10

Notes



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 DWG NO. TAM 8444-8
 STRUCTURAL
 COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B16(i6696)

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

September 19, 2017 09:04:07

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports:

CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B16(i6696)

Specifier:

Designer: CZ

Company:

Msc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

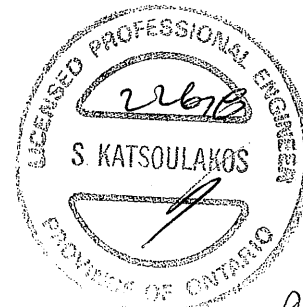
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012**Disclosure**

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**SITE COPY**

DWG NO. TAM 8444-18
STRUCTURAL
COMPONENT ONLY



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

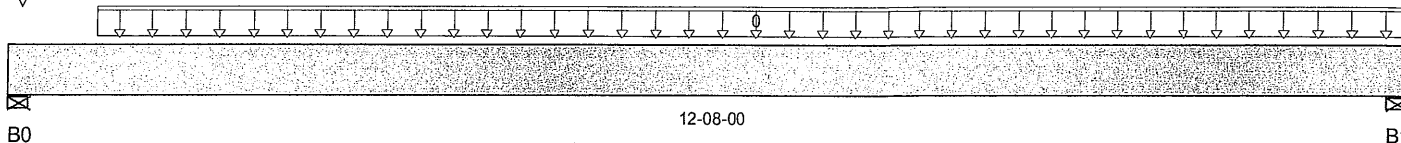
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B171

Specifier:

Designer: CZ

Company:

Msc:



Total Horizontal Product Length = 12-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	1,641 / 0	676 / 0		
B1, 4"	1,577 / 0	652 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	00-09-08	12-08-00	245	92			n/a
1	J4(i6611)	Conc. Pt. (lbs)	L	00-01-08	00-01-08	282	106			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	9,141 ft-lbs	25,408 ft-lbs	36%	1	06-09-08
End Shear	2,738 lbs	11,571 lbs	23.7%	1	01-01-08
Total Load Defl.	L/431 (0.338")	0.606"	55.7%	4	06-04-14
Live Load Defl.	L/609 (0.239")	0.404"	59.1%	5	06-04-14
Max Defl.	0.338"	1"	33.8%	4	06-04-14
Span / Depth	15.3	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0	Wall/Plate 4" x 3-1/2"	3,307 lbs	29.1%	19.4%	Unspecified
B1	Wall/Plate 4" x 3-1/2"	3,181 lbs	28%	18.6%	Unspecified

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume unbraced length of Top: 00-01-15, Bottom: 00-01-15.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012





Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B1

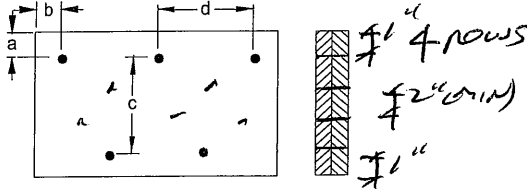
Specifier:

Designer: CZ

Company:

Misc:

Connection Diagram



a minimum = 0" c = 1-1/2"
b minimum = 3" d = 6"

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

Member has no side loads.

Connectors are: 16d Spike Nails

3-1/2" ARDOX SPIRAL

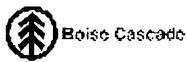
Disclosure

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DWG NO. TAM B445-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B18DR(i6614)

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

September 19, 2017 09:04:07

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

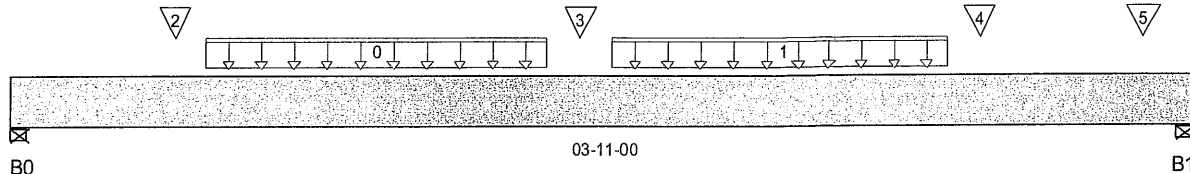
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B18

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 03-11-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	633 / 0	256 / 0		
B1, 4"	792 / 0	316 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	Bk1(i6853)	Unf. Lin. (lb/ft)	L	00-07-12	01-09-04	19	7			n/a
1	Bk1(i6856)	Unf. Lin. (lb/ft)	L	01-11-12	03-01-04	19	7			n/a
2	J3(i6850)	Conc. Pt. (lbs)	L	00-06-08	00-06-08	389	146			n/a
3	J3(i6784)	Conc. Pt. (lbs)	L	01-10-08	01-10-08	384	144			n/a
4	J3(i6612)	Conc. Pt. (lbs)	L	03-02-08	03-02-08	358	134			n/a
5	J4(i6638)	Conc. Pt. (lbs)	L	03-09-00	03-09-00	242	91			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	960 ft-lbs	25,408 ft-lbs	3.8%	1	01-10-08
End Shear	719 lbs	11,571 lbs	6.2%	1	02-09-08
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	01-11-12
Live Load Defl.	L/999 (0.002")	n/a	n/a	5	01-11-12
Max Defl.	0.003"	n/a	n/a	4	01-11-12
Span / Depth	4.3	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	1,269 lbs	11.2%	7.4%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	1,582 lbs	13.9%	9.3%	Unspecified

Notes



SITE COPY



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B1

Specifier:

Designer: CZ

Company:

Msc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume unbraced length of Top: 00-03-04, Bottom: 00-03-04.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA

O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

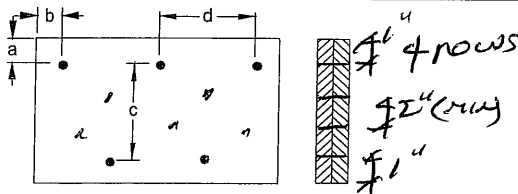
Importance Factor : Normal Part code : Part 9

Disclosure

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Connection Diagram



a minimum = 1" c = 1-1/2"
b minimum = 3" d = 4"

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

Member has no side loads.

Connectors are: 16d ^{16d} Nails

3-1/2" ARDOX SPIRAL



DWG NO. TAM B446-18
STRUCTURAL
COMPONENT ONLY

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

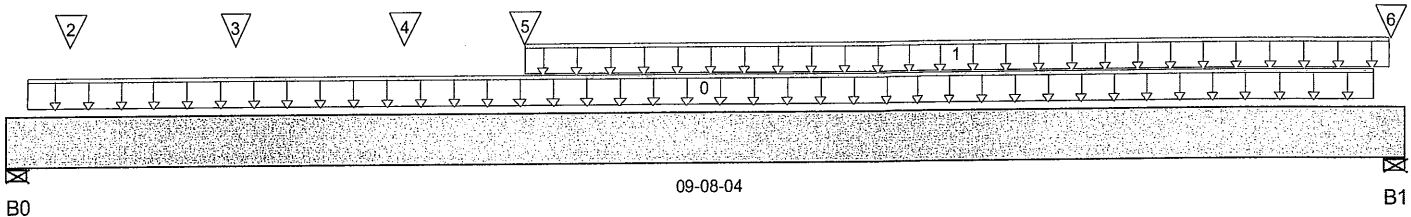
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B19I

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 09-08-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	2,822 / 0	1,386 / 0		
B1, 4-1/4"	3,035 / 0	1,464 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-01-12	09-05-12		60			n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	03-07-00	09-07-00	546	205			n/a
2	-	Conc. Pt. (lbs)	L	00-05-04	00-05-04	637	239			n/a
3	-	Conc. Pt. (lbs)	L	01-07-00	01-07-00	656	246			n/a
4	-	Conc. Pt. (lbs)	L	02-09-01	02-09-01	656	246			n/a
5	J2(i6538)	Conc. Pt. (lbs)	L	03-07-00	03-07-00	317	119			n/a
6	J2(i6633)	Conc. Pt. (lbs)	L	09-07-00	09-07-00	317	119			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	12,592 ft-lbs	25,408 ft-lbs	49.6%	1	04-07-00
End Shear	4,986 lbs	11,571 lbs	43.1%	1	08-06-08
Total Load Defl.	L/4 12 (0.266")	0.456"	58.3%	4	04-10-00
Live Load Defl.	L/6 16 (0.178")	0.304"	58.4%	5	04-10-00
Max Defl.	0.266"	1"	26.6%	4	04-10-00
Span / Depth	11.5	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	5,965 lbs	52.5%	34.9%	Unspecified
B1 Wall/Plate	4-1/4" x 3-1/2"	6,383 lbs	52.8%	35.2%	Unspecified

Notes


 DWG NO. TAM B447-18
 STRUCTURAL
 COMPONENT ONLY

BC CALC® Design Report



Build 5033
Job Name:
Address:
City, Province, Postal Code: BRADFORD,
Customer:
Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B1
Specifier:
Designer: CZ
Company:
Misc:

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.
Design meets User specified (0.75") Maximum live load deflection criteria.
Calculations assume unbraced length of Top: 00-02-12, Bottom: 00-02-12.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

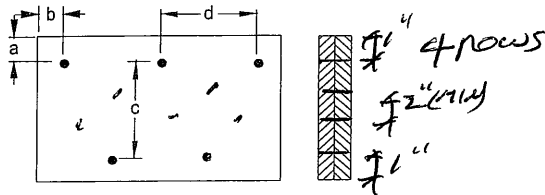
CONFORMS TO OBC 2012

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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Connection Diagram



a minimum = 1" c = 7-1/2"
b minimum = 3" d = 4"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
Member has no side loads.
Connectors are: 16d Sinker Nails

3-1/2" ARDOX SPIRAL



BC CALC® Design Report



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

September 19, 2017 15:44:21

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRANTFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-ELB-OPT.mmdl

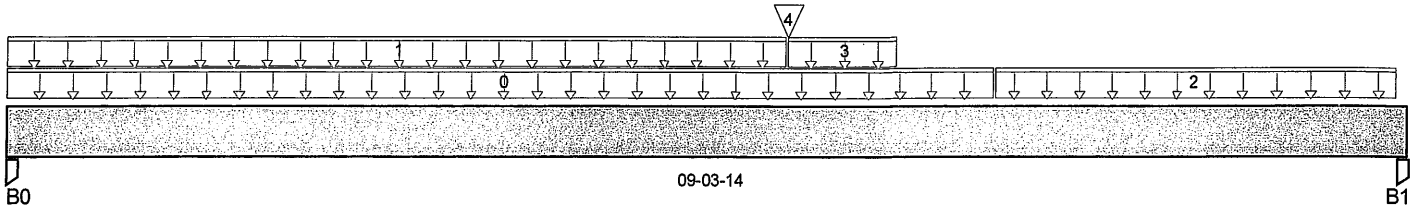
Description: Designs\Flush Beams\1st Floor\Flush Beams\B20(i7871)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 09-03-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	441 / 0	197 / 0		
B1, 3-1/4"	503 / 0	222 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	06-06-15	5	2			n/a
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-02-02	15	6			n/a
2	FC4 Floor Material	Unf. Lin. (lb/ft)	L	06-06-15	09-03-00	6	2			n/a
3	FC4 Floor Material	Unf. Lin. (lb/ft)	L	05-02-02	05-10-15	0	0			n/a
4	B16(i7886)	Conc. Pt. (lbs)	L	05-02-02	05-02-02	797	318			n/a

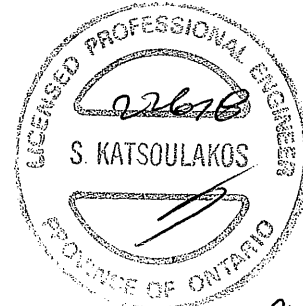
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,884 ft-lbs	12,704 ft-lbs	30.6%	1	05-02-02
End Shear	1,013 lbs	5,785 lbs	17.5%	1	08-03-02
Total Load Defl.	L/841 (0.127")	0.444"	28.5%	4	04-09-08
Live Load Defl.	L/999 (0.089")	n/a	n/a	5	04-09-08
Max Defl.	0.127"	1"	12.7%	4	04-09-08
Span / Depth	11.2	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	908 lbs	18.3%	12.1%	Unspecified
B1 Post	3-1/4" x 1-3/4"	1,031 lbs	22.5%	15%	Unspecified

Notes





Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B20(i7871)

BC CALC® Design Report



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

September 19, 2017 15:44:21

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRANTFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-ELB-OPT.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B20(i7871)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012**Disclosure**

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DWG NO. TAM B448-18
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B21(i6649)

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

September 19, 2017 09:04:07

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code:BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

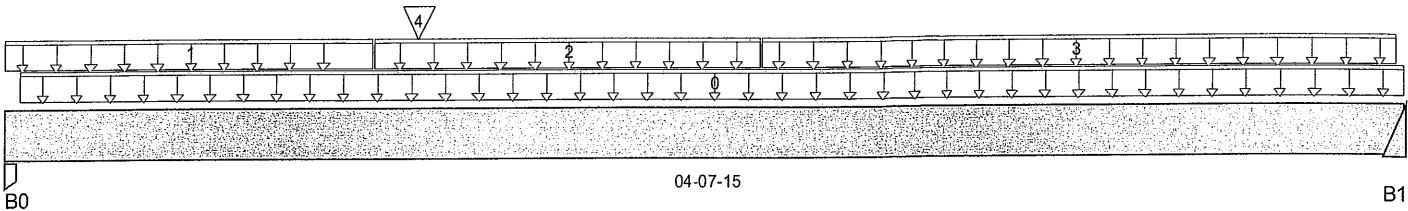
Description: Designs\Flush Beams\1st Floor\Flush Beams\B21(i6649)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 04-07-15

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 2-9/16"	68 / 0	175 / 0		
B1	42 / 0	165 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-10	04-07-15		60			n/a
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-02-12	8	3			n/a
2	FC4 Floor Material	Unf. Lin. (lb/ft)	L	01-02-12	02-06-02	0	0			n/a
3	FC4 Floor Material	Unf. Lin. (lb/ft)	L	02-06-02	04-07-10	24	9			n/a
4	J9(i6780)	Conc. Pt. (lbs)	L	01-04-07	01-04-07	57	21			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	254 ft-lbs	8,258 ft-lbs	3.1%	0	02-03-09
End Shear	157 lbs	3,761 lbs	4.2%	0	01-00-01
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	02-03-09
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	02-02-12
Max Defl.	0.003"	n/a	n/a	4	02-03-09
Span / Depth	5.6	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	2-9/16" x 1-3/4"	245 lbs	10.2%	6.8%	Unspecified
B1 Hanger	2" x 1-3/4"	270 lbs	n/a	8.3%	LS90

Notes**SITE COPY**



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B21(i6649)

BC CALC® Design Report



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

September 19, 2017 09:04:07

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B21(i664

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume unbraced length of Top: 00-02-07, Bottom: 00-02-07.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012**Disclosure**

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*port*

DWG NO. TAM **B449**
STRUCTURAL
COMPONENT ONLY

SITE COPY

BC CALC® Design Report



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

September 19, 2017 09:04:07

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

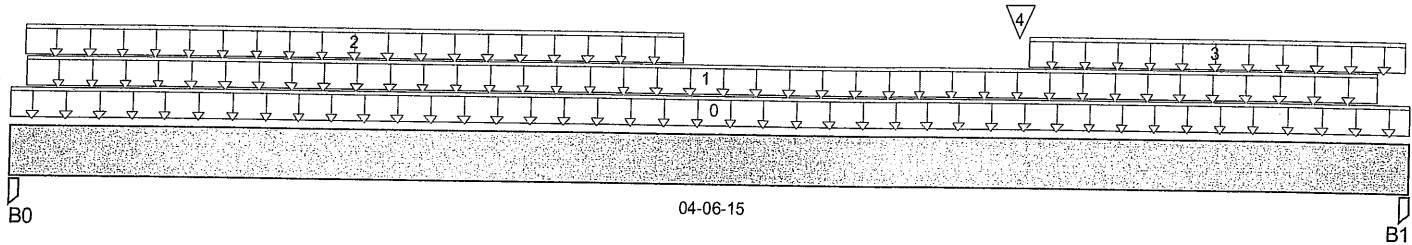
Description: Designs\Flush Beams\1st Floor\Flush Beams\B22(i6752)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 04-06-15

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	615 / 0	312 / 0		
B1, 2-9/16"	608 / 0	306 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	0	Unf. Lin. (lb/ft)	L	00-00-00	04-06-15	240	120			n/a
1	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-10	04-05-11	6	2			n/a
2	FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-00-09	02-02-05	3	1			n/a
3	FC4 Floor Material	Unf. Lin. (lb/ft)	L	03-04-00	04-06-12	19	7			n/a
4	J8(i6689)	Conc. Pt. (lbs)	L	03-03-09	03-03-09	48	18			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,244 ft-lbs	12,704 ft-lbs	9.8%	1	02-04-06
End Shear	769 lbs	5,785 lbs	13.3%	1	03-06-14
Total Load Defl.	L/999 (0.011")	n/a	n/a	4	02-04-06
Live Load Defl.	L/999 (0.007")	n/a	n/a	5	02-04-06
Max Defl.	0.011"	n/a	n/a	4	02-04-06
Span / Depth	5.3	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	4" x 1-3/4"	1,313 lbs	23.2%	15.4%	Unspecified
B1 Post	2-9/16" x 1-3/4"	1,294 lbs	35.3%	23.5%	Unspecified

Notes





Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B22(i6752)

BC CALC® Design Report



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

September 19, 2017 09:04:07

Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B22(i6752)

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume unbraced length of Top: 00-01-14, Bottom: 00-01-14.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

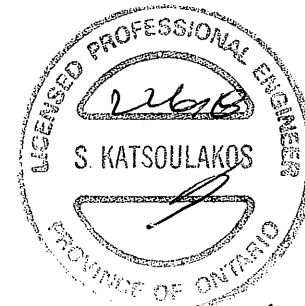
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012**Disclosure**

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DWG NO. TAM **B450-18**
STRUCTURAL
COMPONENT ONLY

SITE COPY



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL A OPT.mmdl

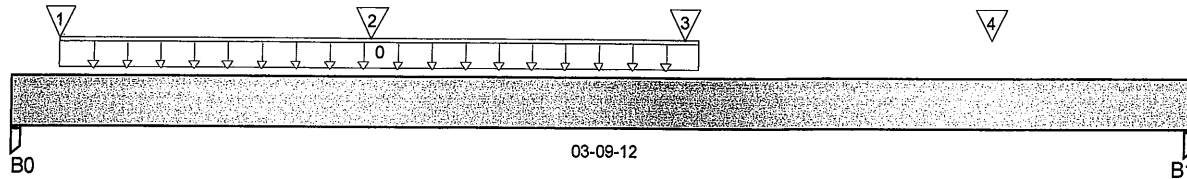
Description: Designs\Flush Beams\1st Floor\Flush Beams\B23(i9286)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 03-09-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-7/8"	640 / 0	258 / 0		
B1, 3-1/2"	662 / 0	269 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 FC4 Floor Material	Unf. Lin. (lb/ft)	L	00-01-14	02-02-08	7	3			n/a
1 J10(i8332)	Conc. Pt. (lbs)	L	00-01-14	00-01-14	204	76			n/a
2 J9(i9092)	Conc. Pt. (lbs)	L	01-01-14	01-01-14	328	123			n/a
3 -	Conc. Pt. (lbs)	L	02-02-00	02-02-00	386	148			n/a
4 -	Conc. Pt. (lbs)	L	03-01-15	03-01-15	370	139			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,142 ft-lbs	25,408 ft-lbs	4.5%	1	02-01-14
End Shear	1,261 lbs	11,571 lbs	10.9%	1	00-11-06
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	01-10-02
Live Load Defl.	L/999 (0.002")	n/a	n/a	5	01-10-02
Max Defl.	0.003"	n/a	n/a	4	01-10-02
Span / Depth	4.4	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-7/8" x 3-1/2"	1,283 lbs	23.9%	15.9%	Unspecified
B1 Post	3-1/2" x 3-1/2"	1,330 lbs	13.4%	8.9%	Unspecified

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9



P6 1/2



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA8C-EL A OPT.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B23(i9286)

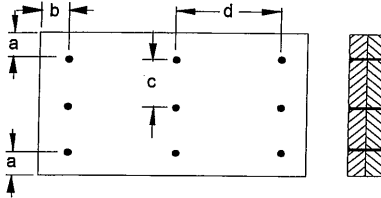
Specifier:

Designer: CZ

Company:

Misc:

Connection Diagram



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

Calculated Side Load = 610.3 lb/ft

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

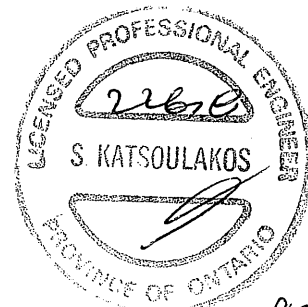
Connectors are: 16d  Nails

3-1/2" ARDOX SPIRAL

Disclosure

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port



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

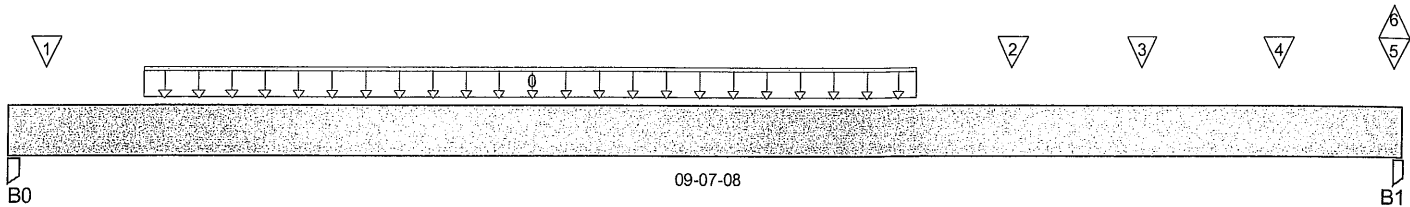
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B24I

Specifier:

Designer: CZ

Company:

Msc:



Total Horizontal Product Length = 09-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	537 / 0	255 / 0		
B1, 3-1/2"	926 / 10	426 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	00-11-04	06-03-04	105	39			n/a
1	-	Conc. Pt. (lbs)	L	00-03-01	00-03-01	90	44			n/a
2	J7(i6798)	Conc. Pt. (lbs)	L	06-11-04	06-11-04	119	45			n/a
3	-	Conc. Pt. (lbs)	L	07-10-01	07-10-01	193	83			n/a
4	J5(i6843)	Conc. Pt. (lbs)	L	08-09-06	08-09-06	240	90			n/a
5	B20(i6684)	Conc. Pt. (lbs)	L	09-06-10	09-06-10	237	116			n/a
6	B20(i6684)	Conc. Pt. (lbs)	L	09-06-10	09-06-10	-10				n/a

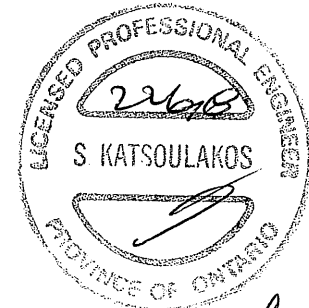
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,563 ft-lbs	25,408 ft-lbs	10.1%	1	05-07-04
End Shear	1,265 lbs	11,571 lbs	10.9%	1	08-06-08
Total Load Defl.	L/999 (0.055")	n/a	n/a	6	04-11-04
Live Load Defl.	L/999 (0.038")	n/a	n/a	8	04-11-04
Max Defl.	0.055"	n/a	n/a	6	04-11-04
Span / Depth	11.6	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 3-1/2"	1,124 lbs	11.3%	7.5%	Unspecified
B1 Post	3-1/2" x 3-1/2"	1,921 lbs	19.3%	12.9%	Unspecified

Notes





Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C.mmdl

Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B2

Specifier:

Designer: CZ

Company:

Misc:

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.

Design meets User specified (0.75") Maximum live load deflection criteria.

Calculations assume unbraced length of Top: 00-08-12, Bottom: 00-08-12.

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

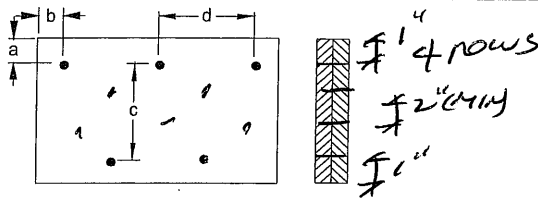
CONFORMS TO OBC 2012

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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 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.

Connection Diagram



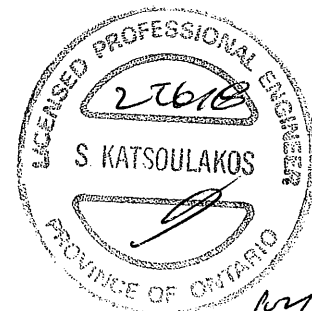
a minimum = 1" c = 1-1/2"
b minimum = 3" d = 6"

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

Member has no side loads.

Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor...\B26(i9458)

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

September 19, 2017 15:04:57

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL C.mxd

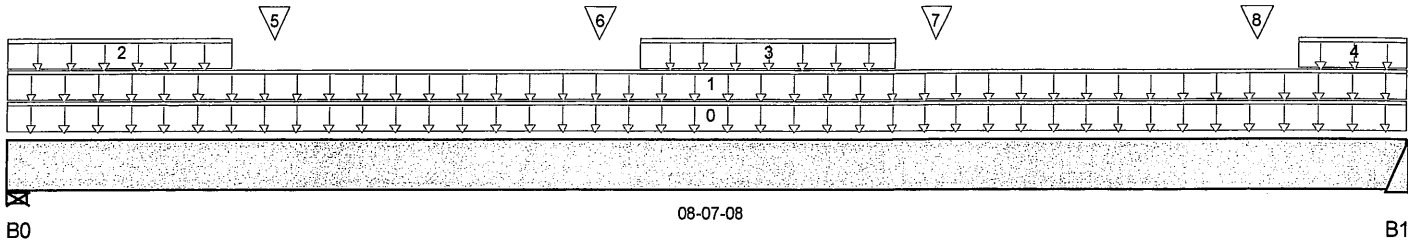
Description: Designs\Flush Beams\1st Floor\Flush Beams\B26(i9458)

Specifier:

Designer: CZ

Company:

Misc:



Total Horizontal Product Length = 08-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	512 / 0	961 / 0	1,505 / 0	
B1	497 / 0	922 / 0	1,489 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	LOWROOF	Unf. Lin. (lb/ft)	L	00-00-00	08-07-08	44	40	132		n/a
1	User Load	Unf. Lin. (lb/ft)	L	00-00-00	08-07-08		100			n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-00-00	01-04-08	33	30	99		n/a
3	User Load	Unf. Lin. (lb/ft)	L	03-10-08	05-05-08	33	30	99		n/a
4	User Load	Unf. Lin. (lb/ft)	L	07-11-08	08-07-08	33	30	99		n/a
5	User Load	Conc. Pt. (lbs)	L	01-07-08	01-07-08	125	120	374		n/a
6	User Load	Conc. Pt. (lbs)	L	03-07-08	03-07-08	125	120	374		n/a
7	User Load	Conc. Pt. (lbs)	L	05-08-08	05-08-08	125	120	374		n/a
8	User Load	Conc. Pt. (lbs)	L	07-08-08	07-08-08	125	120	374		n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,137 ft-lbs	25,408 ft-lbs	28.1%	13	04-04-07
End Shear	3,170 lbs	11,571 lbs	27.4%	13	07-08-00
Total Load Defl.	L/999 (0.124")	n/a	n/a	45	04-05-10
Live Load Defl.	L/999 (0.081")	n/a	n/a	61	04-05-10
Max Defl.	0.124"	n/a	n/a	45	04-05-10
Span / Depth	10.3	n/a	n/a		00-00-00

Bearing Supports

B0	Wall/Plate	5-1/2" x 3-1/2"	3,715 lbs	36.1%	15.8%	Unspecified
B1	Hanger	2" x 3-1/2"	3,635 lbs	n/a	42.6%	HGUS410

Notes



SITE COPY

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: BRADFORD,

Customer:

Code reports: CCMC 12472-R

File Name: S38-8C BAROSSA 8C-EL C.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B26(i9458)

Specifier:

Designer: CZ

Company:

Misc:

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

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

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

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

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

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

Design based on Dry Service Condition.

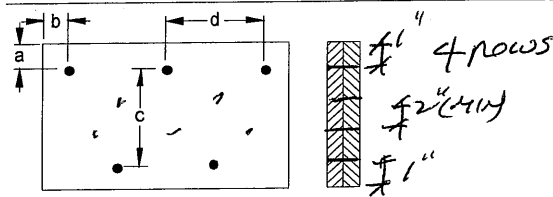
Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

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 Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Connection Diagram



a minimum = 1" c = 1-1/2"
b minimum = 3" d = 6"

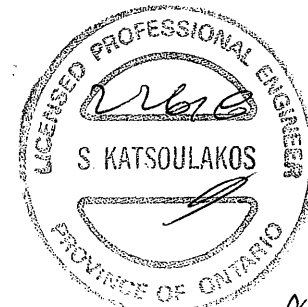
Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Member has no side loads.

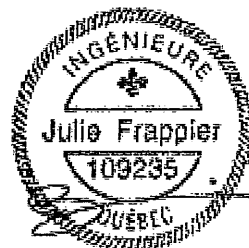
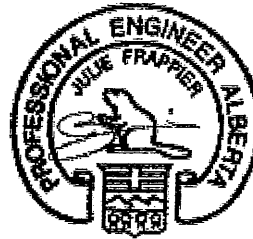
Connectors are: 16d ~~Spiker~~ Nails

3-1/2" ARDOX SPIRAL

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.



DWG NO. TAM B453-18
STRUCTURAL
COMPONENT ONLY



Maximum Floor Spans

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

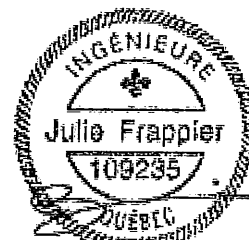
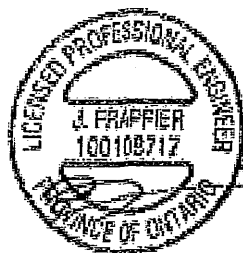
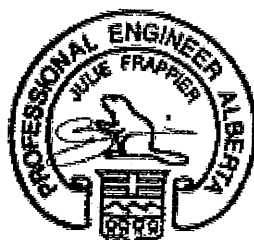
Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	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'-8"	15'-3"	14'-5"	N/A	16'-8"	15'-3"	14'-5"	N/A
	NI-40x	17'-11"	16'-11"	16'-1"	N/A	18'-5"	17'-1"	16'-1"	N/A
	NI-60	18'-2"	17'-1"	16'-4"	N/A	18'-7"	17'-4"	16'-4"	N/A
	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A
	NI-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A
11-7/8"	NI-20	19'-6"	18'-1"	17'-3"	N/A	19'-11"	18'-3"	17'-3"	N/A
	NI-40x	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	19'-2"	N/A
	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/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- 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, NBC 2010, and OBC 2012.
- 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.

Maximum Floor Spans

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



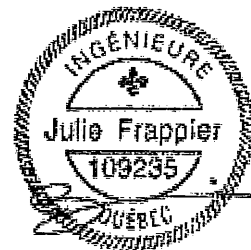
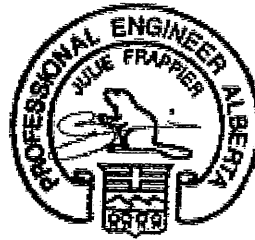
Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-9"	17'-5"	16'-5"	15'-10"	15'-2"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-6"	16'-7"	15'-11"	15'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"	15'-11"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-10"	16'-10"	16'-2"	15'-6"	18'-6"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-6"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
14"	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	NI-40x	21'-5"	19'-10"	18'-11"	17'-11"	22'-1"	20'-6"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
16"	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

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"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-70	20'-0"	18'-7"	17'-9"	16'-7"	20'-5"	18'-11"	17'-10"	16'-7"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
	NI-60	22'-1"	20'-7"	19'-7"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-70	23'-4"	21'-8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"
	NI-80	23'-7"	21'-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"
14"	NI-90x	24'-3"	22'-6"	21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"
	NI-40x	24'-5"	22'-9"	21'-8"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"
	NI-60	24'-10"	23'-1"	22'-0"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-70	26'-1"	24'-3"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"
	NI-80	26'-6"	24'-7"	23'-5"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
16"	NI-90x	27'-3"	25'-4"	24'-1"	22'-9"	27'-9"	25'-11"	24'-8"	23'-4"
	NI-60	27'-3"	25'-5"	24'-2"	22'-10"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-70	28'-8"	26'-8"	25'-4"	23'-11"	29'-3"	27'-4"	26'-1"	24'-8"
	NI-80	29'-1"	27'-0"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90x	29'-11"	27'-10"	26'-6"	25'-0"	30'-6"	28'-5"	27'-2"	25'-8"

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- 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, NBC 2010, and OBC 2012.
- 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.

Maximum Floor Spans

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



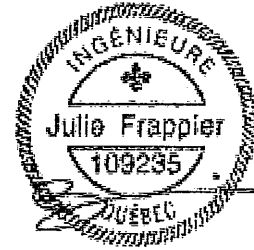
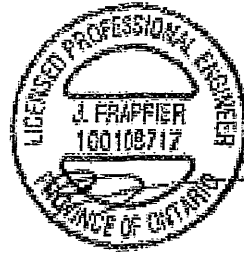
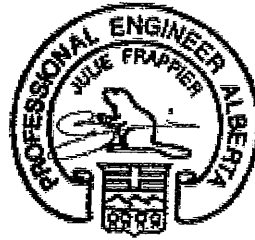
Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	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
	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
14"	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
	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
16"	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	15'-7"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	17'-9"	16'-1"	15'-1"	N/A	17'-9"	16'-1"	15'-1"	N/A
	NI-60	18'-1"	16'-4"	15'-4"	N/A	18'-1"	16'-4"	15'-4"	N/A
	NI-70	19'-2"	17'-10"	16'-9"	N/A	19'-7"	17'-10"	16'-9"	N/A
	NI-80	19'-5"	18'-0"	17'-1"	N/A	19'-10"	18'-3"	17'-1"	N/A
11-7/8"	NI-20	18'-9"	17'-0"	16'-0"	N/A	18'-9"	17'-0"	16'-0"	N/A
	NI-40x	21'-0"	19'-3"	17'-9"	N/A	21'-3"	19'-3"	17'-9"	N/A
	NI-60	21'-4"	19'-8"	18'-5"	N/A	21'-8"	19'-8"	18'-5"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-4"	20'-0"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-5"	N/A
	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
14"	NI-40x	23'-7"	21'-5"	19'-6"	N/A	24'-1"	21'-5"	19'-6"	N/A
	NI-60	24'-0"	22'-3"	21'-0"	N/A	24'-8"	22'-5"	21'-0"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-9"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
16"	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	24'-10"	23'-4"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	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 30 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- 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, NBC 2010, and OBC 2012.
- 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.

Maximum Floor Spans

Live Load = 40 psf, Dead Load = 30 psf
Simple Spans, L/480 Deflection Limit
3/4" 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'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-0"	16'-0"	15'-1"	13'-11"	17'-5"	16'-1"	15'-1"	13'-11"
	NI-60	17'-2"	16'-2"	15'-5"	14'-3"	17'-6"	16'-5"	15'-5"	14'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-6"	18'-5"	17'-3"	16'-7"	15'-6"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	15'-10"
11-7/8"	NI-20	17'-10"	16'-10"	16'-0"	14'-10"	18'-6"	17'-1"	16'-0"	14'-10"
	NI-40x	19'-4"	17'-11"	17'-3"	15'-10"	19'-11"	18'-6"	17'-9"	15'-10"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-1"
	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
14"	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	NI-40x	21'-5"	19'-10"	18'-11"	17'-5"	22'-1"	20'-6"	19'-6"	17'-5"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
16"	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

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	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-9"	16'-1"	15'-1"	13'-11"	17'-9"	16'-1"	15'-1"	13'-11"
	NI-60	18'-1"	16'-5"	15'-5"	14'-3"	18'-1"	16'-5"	15'-5"	14'-3"
	NI-70	19'-10"	17'-11"	16'-9"	15'-6"	19'-10"	17'-11"	16'-9"	15'-6"
	NI-80	20'-2"	18'-3"	17'-1"	15'-10"	20'-2"	18'-3"	17'-1"	15'-10"
11-7/8"	NI-20	18'-10"	17'-1"	16'-0"	14'-10"	18'-10"	17'-1"	16'-0"	14'-10"
	NI-40x	21'-3"	19'-3"	17'-9"	15'-10"	21'-3"	19'-3"	17'-9"	15'-10"
	NI-60	21'-9"	19'-8"	18'-5"	17'-1"	21'-9"	19'-8"	18'-5"	17'-1"
	NI-70	23'-4"	21'-5"	20'-1"	18'-6"	23'-8"	21'-5"	20'-1"	18'-6"
	NI-80	23'-7"	21'-10"	20'-5"	18'-11"	24'-1"	21'-10"	20'-5"	18'-11"
14"	NI-90x	24'-3"	22'-6"	21'-3"	19'-7"	24'-8"	22'-7"	21'-3"	19'-7"
	NI-40x	24'-2"	21'-5"	19'-6"	17'-5"	24'-2"	21'-5"	19'-6"	17'-5"
	NI-60	24'-9"	22'-5"	21'-0"	19'-6"	24'-9"	22'-5"	21'-0"	19'-6"
	NI-70	26'-1"	24'-3"	22'-9"	21'-0"	26'-8"	24'-3"	22'-9"	21'-0"
	NI-80	26'-6"	24'-7"	23'-3"	21'-6"	27'-1"	24'-10"	23'-3"	21'-6"
16"	NI-90x	27'-3"	25'-4"	24'-1"	22'-4"	27'-9"	25'-10"	24'-3"	22'-4"
	NI-60	27'-3"	24'-11"	23'-5"	21'-7"	27'-6"	24'-11"	23'-5"	21'-7"
	NI-70	28'-8"	26'-8"	25'-3"	23'-4"	29'-3"	26'-11"	25'-3"	23'-4"
	NI-80	29'-1"	27'-0"	25'-9"	23'-10"	29'-8"	27'-6"	25'-10"	23'-10"
	NI-90x	29'-11"	27'-10"	26'-6"	24'-10"	30'-6"	28'-5"	26'-11"	24'-10"

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- 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, NBC 2010, and OBC 2012.
- 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.

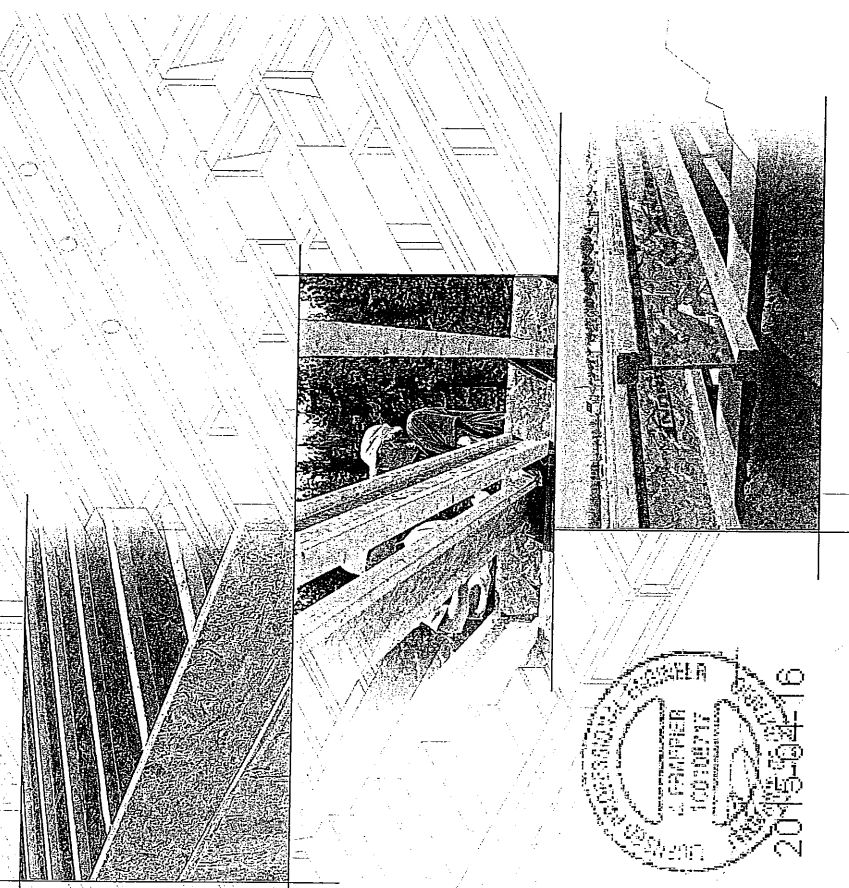


NORDIC

ENGINEERED WOOD

INSTALLATION GUIDE

FOR RESIDENTIAL FLOORS



100% FSC
 100% RECYCLED
 100% SOY INK
 2015-02-16

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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.

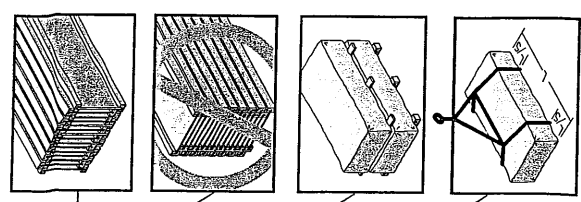
Avoid Accidents by Following these Important Guidelines:

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 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 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.



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 O86-09 Standard, and NBC 2010.
- SI units conversion: 1 inch = 25.4 mm
1 foot = 0.305 m

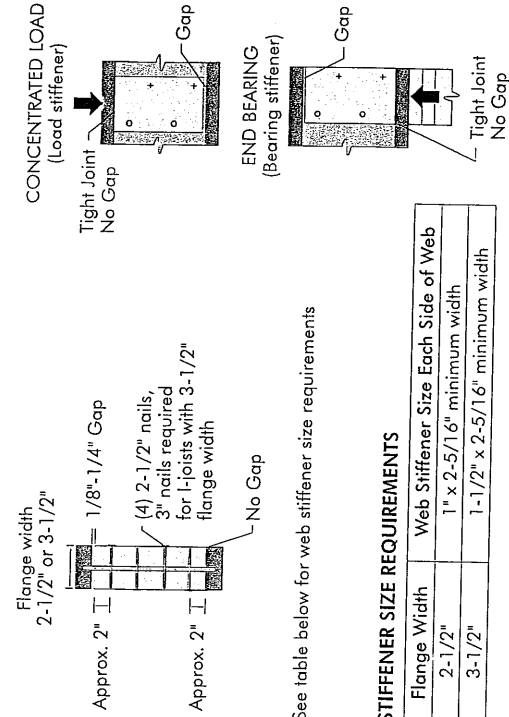
WEB STIFFENERS

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.
- SI units conversion: 1 inch = 25.4 mm

FIGURE 2

WEB STIFFENER INSTALLATION DETAILS



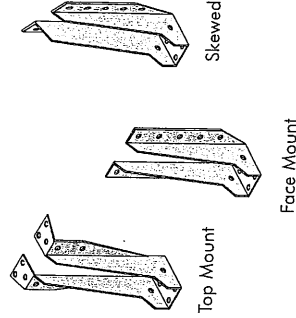
MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS

Joist Depth	Joist Series	Simple spans			Multiple spans		
		12'	16'	19.2'	24'	On centre spacing	On centre spacing
9-1/2"	NI-20	15-1"	14-2"	13-9"	13-5"	16-3"	15-4"
	NI-40x	16-1"	15-2"	14-8"	14-9"	17-5"	16-5"
	NI-60	16-3"	15-4"	14-10"	14-11"	17-7"	16-7"
	NI-70	17-1"	16-1"	15-6"	15-7"	18-7"	17-4"
11-7/8"	NI-80	17-3"	16-3"	15-8"	15-9"	18-10"	17-6"
	NI-20	16-11"	16-0"	15-5"	15-6"	18-4"	17-3"
	NI-40x	18-1"	17-0"	16-5"	16-6"	20-0"	18-6"
	NI-60	18-4"	17-3"	16-7"	16-9"	20-3"	18-9"
14"	NI-70	19-6"	18-0"	17-4"	17-5"	21-6"	19-11"
	NI-80	19-9"	18-3"	17-6"	17-7"	21-9"	19-0"
	NI-90	20-2"	18-7"	17-10"	17-11"	22-3"	19-3"
	NI-90x	20-4"	18-9"	17-11"	18-0"	22-5"	19-8"
16"	NI-40x	20-1"	18-7"	17-10"	17-11"	22-2"	19-8"
	NI-60	20-5"	18-11"	18-1"	18-2"	22-7"	20-1"
	NI-70	21-7"	20-0"	19-1"	19-2"	23-10"	21-1"
	NI-80	21-11"	20-3"	19-4"	19-5"	24-3"	21-5"
18"	NI-90	22-5"	20-8"	19-9"	19-10"	24-9"	21-6"
	NI-90x	22-7"	20-11"	19-11"	20-0"	25-0"	22-10"
	NI-60	22-3"	20-8"	20-8"	20-9"	24-7"	22-9"
	NI-70	23-6"	21-9"	20-9"	20-10"	26-0"	23-0"
20"	NI-80	23-11"	21-1"	21-2"	21-2"	26-5"	23-4"
	NI-90	24-5"	22-6"	21-5"	21-6"	26-11"	24-10"
	NI-90x	24-8"	22-9"	21-9"	21-10"	27-3"	25-2"
	NI-40x	24-1"	22-11"	21-11"	22-0"	28-1"	26-1"

CCMC EVALUATION REPORT T3082-R

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.



NORDIC I-JOIST SERIES

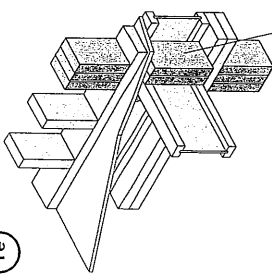
NI-20	NI-40x	NI-60	NI-70	NI-80	NI-90	NI-90x
1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
OSB 3/8"	OSB 3/8"	OSB 3/8"	OSB 3/8"	OSB 3/8"	OSB 3/8"	OSB 3/8"
11-7/8"	11-7/8"	11-7/8"	11-7/8"	11-7/8"	11-7/8"	11-7/8"
14"	14"	14"	14"	14"	14"	14"
16"	16"	16"	16"	16"	16"	16"
S-P-F No.2	1950f MSR	2100f MSR	1950f MSR	2100f MSR	2400f MSR	NPG Lumber
33 pieces per unit	33 pieces per unit	33 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit

Chantiers Chibougama 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 the raw material 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

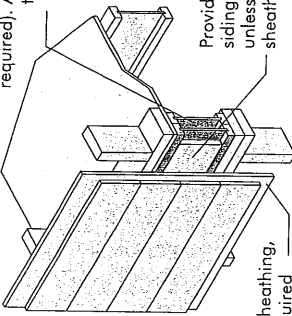
1e



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

1f

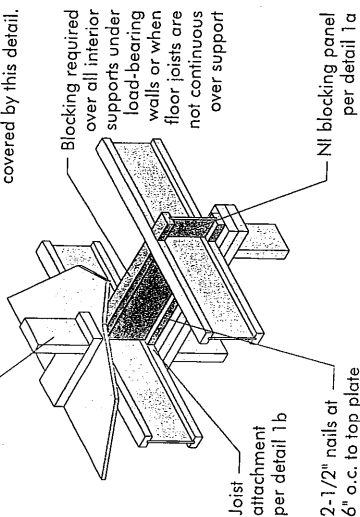
Use single I-joist for loads up to 3,300 plf, double I-joists for loads up to 6,600 plf (filler block not required). Attach I-joist to top plate using 2-1/2" nails at 6" o.c.



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

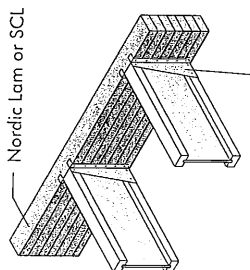
1g

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



1k

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

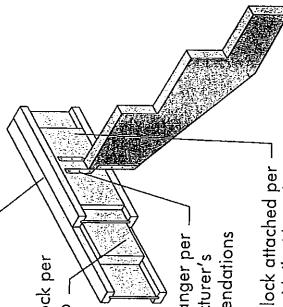


Top- or face-mount hanger installed per manufacturer's recommendations. For nailing schedules for multiple beams, see the manufacturer's recommendations.

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

1m

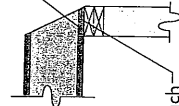
Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify double I-joist capacity to support concentrated loads.



Maximum support capacity = 1,620 lbs.

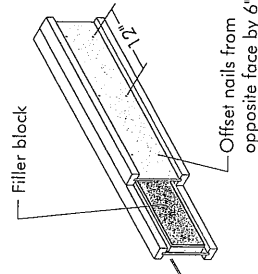
1n

Do not bevel-cut joist beyond inside face of wall.



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

1p



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

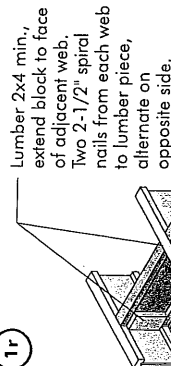
Notes:

- 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. (clinch 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 lb/ft. Verify double I-joist capacity.

FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

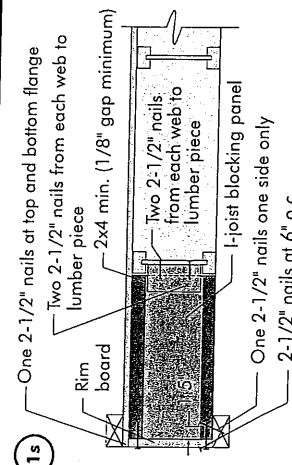
Flange Size	Joist Depth	Filler Block Size
2-1/2" x 1-1/2"	9-1/2"	2-1/8" x 6"
	11-7/8"	2-1/8" x 8"
	14"	2-1/8" x 10"
	16"	2-1/8" x 12"
3-1/2" x 1-1/2"	9-1/2"	3" x 6"
	11-7/8"	3" x 8"
	14"	3" x 10"
	16"	3" x 12"
3-1/2" x 2"	11-7/8"	3" x 7"
	14"	3" x 9"
	16"	3" x 11"

1r



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.

1s



Notes:

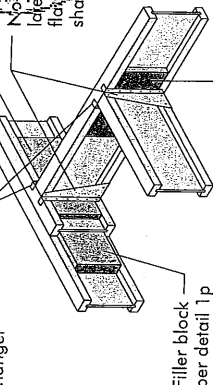
- In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local code requirements for spacing of the blocking.
- All nails are common spiral in this detail.

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.

Double I-joist header

Top- or face-mount hanger



Filler block per detail 1p

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

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

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"

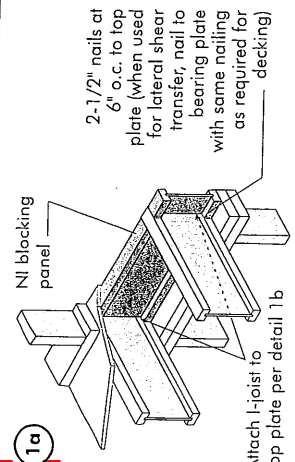
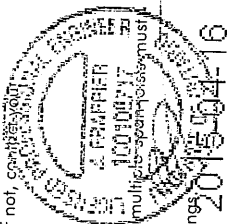
* Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-O437 Standard.

** 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".

SITE COPY

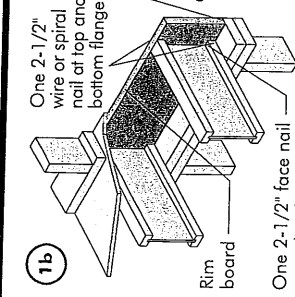
INSTALLING NORDIC I-JOISTS

1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, contact 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 spans 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.



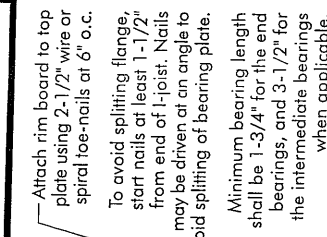
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
NI Joists	3,300

*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.

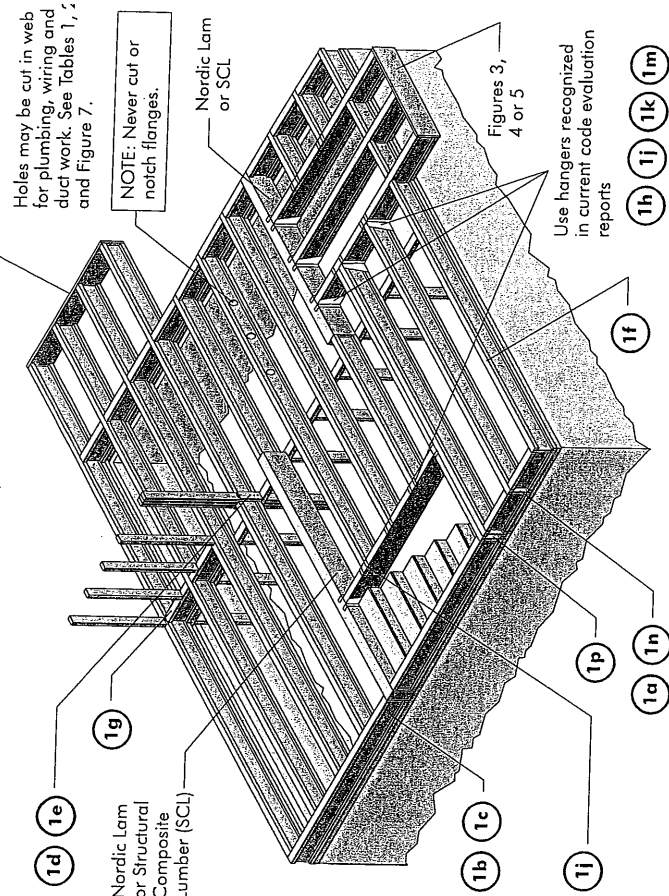


Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

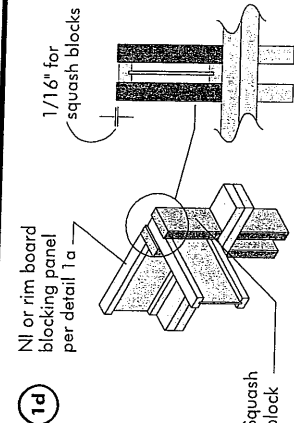
*The uniform vertical load is limited to a rim board depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.

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.

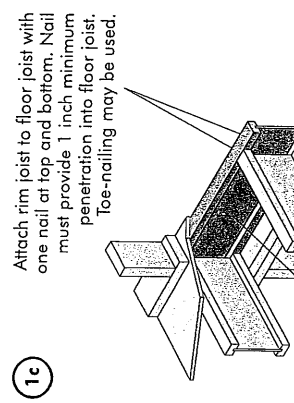


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for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



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

Provide lateral bracing per detail 1a, 1b, or 1c

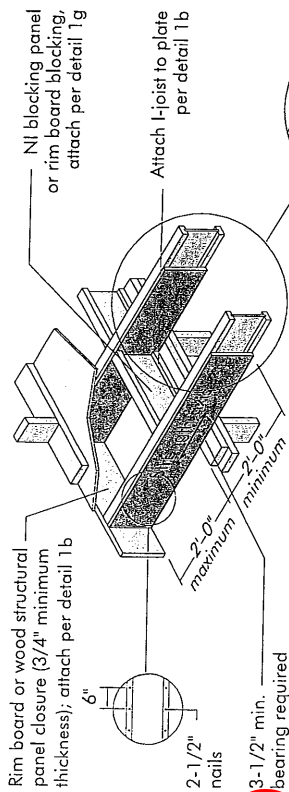


Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

*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.

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

Method 1 — SHEATHING REINFORCEMENT ONE SIDE

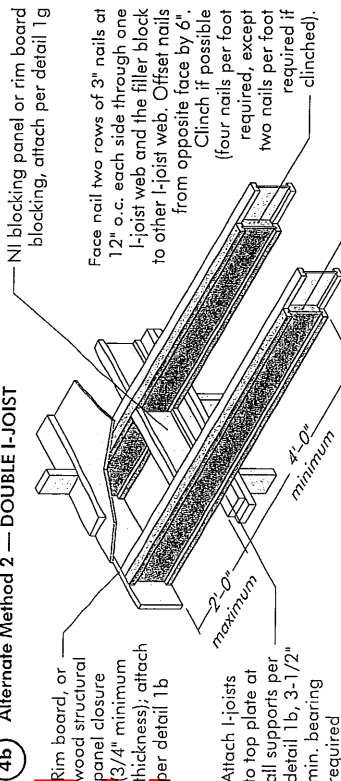


Method 2 — SHEATHING REINFORCEMENT TWO SIDES

- 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".

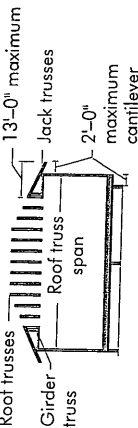
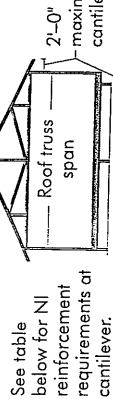
Note: Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail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

Alternate Method 2 — DOUBLE I-JOIST



Block I-joists together with filler blocks for the full length of the reinforcement. For I-joist flange widths greater than 3 inches place an additional row of 3" nails along the centreline of the reinforcing panel from each side. Clinch when possible.

FIGURE 4 (continued)



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)	ROOF LOADING (UNFACTORED)					JOIST SPACING (in.)				
		LL = 30 psf, DL = 15 psf					LL = 40 psf, DL = 15 psf				
		12	16	19.2	24		12	16	19.2	24	
9-1/2"	26	N	N	1	2		N	1	2	X	
	28	N	N	1	2		N	1	2	X	
	30	N	N	1	2		N	1	2	X	
	32	N	N	1	2		N	1	2	X	
	34	N	N	1	2		N	1	2	X	
11-7/8"	26	N	N	1	2		N	1	2	X	
	28	N	N	1	2		N	1	2	X	
	30	N	N	1	2		N	1	2	X	
	32	N	N	1	2		N	1	2	X	
	34	N	N	1	2		N	1	2	X	
14"	26	N	N	1	2		N	1	2	X	
	28	N	N	1	2		N	1	2	X	
	30	N	N	1	2		N	1	2	X	
	32	N	N	1	2		N	1	2	X	
	34	N	N	1	2		N	1	2	X	
16"	26	N	N	1	2		N	1	2	X	
	28	N	N	1	2		N	1	2	X	
	30	N	N	1	2		N	1	2	X	
	32	N	N	1	2		N	1	2	X	
	34	N	N	1	2		N	1	2	X	

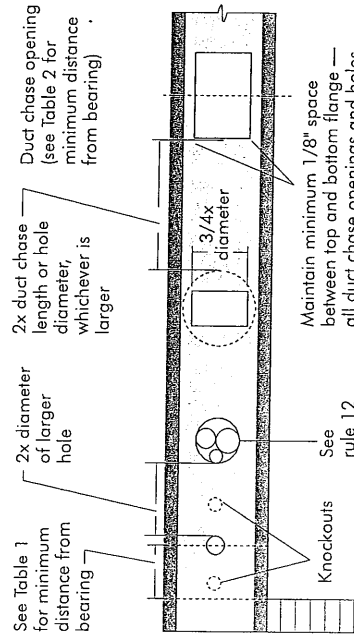
- N = No reinforcement required.
1 = NI reinforced with 3/4" wood structural panel on one side only.
2 = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.
X = Try a deeper joist or closer spacing.
- Maximum design load shall be: 15 psf roof dead load, 55 psf floor live load, 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.
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.
- 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.
- Cantilevered joists supporting girder trusses or roof beams may require additional reinforcing.

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-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole or the maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole or opening and the adjacent I-joist flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole 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.

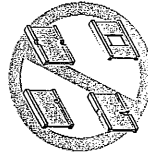
FIGURE 7

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 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 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 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.)															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	
9-1/2"	NI-20	0-7"	1-6"	2-10"	4-3"	5-8"	6-0"	---	---	---	---	---	---	---	---	---	
	NI-40x	0-7"	1-6"	3-0"	4-4"	6-0"	6-4"	---	---	---	---	---	---	---	---	13-6"	
	NI-60	1-3"	2-6"	4-0"	5-4"	7-0"	7-5"	---	---	---	---	---	---	---	---	14-11"	
	NI-80	2-0"	3-4"	4-9"	6-3"	8-0"	8-4"	---	---	---	---	---	---	---	---	15-7"	
11-7/8"	NI-20	0-7"	0-8"	1-0"	2-4"	3-8"	4-0"	5-0"	6-5"	7-9"	---	---	---	---	---	15-9"	
	NI-40x	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-5"	7-0"	8-4"	---	---	---	---	---	15-6"	
	NI-60	1-3"	2-6"	4-0"	5-4"	6-9"	7-2"	8-4"	10-0"	10-0"	---	---	---	---	---	16-9"	
	NI-80	1-6"	2-10"	4-2"	5-6"	7-0"	7-5"	8-6"	10-3"	11-4"	---	---	---	---	---	17-5"	
14"	NI-20	0-7"	0-8"	1-5"	3-2"	4-10"	5-4"	6-9"	8-9"	10-2"	---	---	---	---	---	17-7"	
	NI-40x	0-7"	0-8"	0-9"	2-5"	4-4"	4-9"	6-3"	8-4"	10-2"	---	---	---	---	---	17-11"	
	NI-60	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	8-3"	10-2"	---	---	---	18-0"	
	NI-80	0-7"	0-8"	1-8"	3-0"	4-3"	4-8"	5-8"	7-2"	8-0"	8-8"	10-4"	11-9"	---	---	17-11"	
16"	NI-20	0-8"	1-10"	3-0"	4-5"	5-10"	6-5"	7-3"	8-9"	9-9"	10-4"	12-0"	13-5"	---	---	18-2"	
	NI-40x	0-8"	1-10"	3-0"	4-5"	6-2"	6-5"	7-6"	9-0"	10-0"	10-8"	12-4"	13-9"	---	---	19-2"	
	NI-60	0-7"	0-8"	0-10"	2-5"	4-0"	4-5"	5-9"	7-5"	8-9"	9-4"	11-4"	12-11"	---	---	19-5"	
	NI-80	0-7"	0-8"	0-8"	2-0"	3-9"	4-2"	5-5"	7-3"	8-5"	9-2"	---	---	---	---	19-9"	
18"	NI-20	0-7"	0-8"	0-8"	1-6"	2-10"	3-2"	4-2"	5-6"	6-4"	7-0"	8-5"	10-2"	12-2"	13-9"	20-0"	
	NI-40x	0-7"	0-8"	0-8"	1-3"	2-8"	4-0"	4-4"	5-5"	6-4"	7-0"	8-5"	9-8"	10-2"	12-2"	19-10"	
	NI-60	0-7"	0-8"	0-8"	2-3"	3-6"	4-10"	5-3"	6-3"	7-8"	8-6"	9-2"	10-8"	12-0"	14-0"	20-10"	
	NI-80	0-7"	0-8"	0-8"	2-6"	3-10"	5-3"	5-6"	6-6"	8-0"	9-5"	11-0"	12-3"	12-9"	14-5"	15-6"	
21"	NI-20	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"	21-2"	
	NI-40x	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"	21-2"	
	NI-60	0-7"	0-8"	0-8"	2-0"	3-6"	4-0"	5-0"	6-9"	7-9"	8-4"	10-2"	11-6"	12-0"	13-9"	21-10"	
	NI-80	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"	13-9"	21-10"	

Above table may be used for live loads up to 40 psf

1. Above table may be used for I-joist 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 of Joists 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:

$$\text{Reduced } L_{\text{actual}} = \frac{L_{\text{actual}}}{\text{SAF}} \times D$$

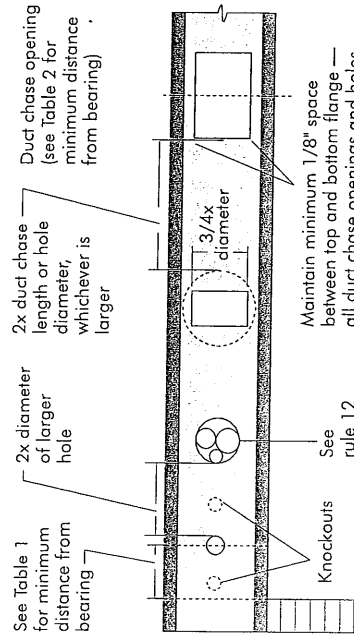
Where:

- Reduced = Distance from the inside face of any support to centre of hole, reduced for less-than-maximum span applications
- L_{actual} = The actual measured span distance between the inside faces of supports (ft.)
- SAF = 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 L_{actual} is greater than 1, use 1 in the above calculation for L_{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.

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.)											
		8	10	12	14	16	18	20	22	24	26	28	30
9-1/2"	NI-20	4-1"	4-5"	5-0"	5-4"	5-8"	6-1"	6-5"	6-9"	7-3"	7-7"	8-1"	8-5"
	NI-40x	4-1"	4-5"	5-0"	5-4"	5-8"	6-1"	6-5"	6-9"	7-3"	7-7"	8-1"	8-5"
	NI-60	5-1"	5-6"	6-0"	6-4"	6-8"	7-1"	7-5"	7-9"	8-3"	8-7"	9-1"	9-5"
	NI-80	5-1"	5-6"	6-0"	6-4"	6-8"	7-1"	7-5"	7-9"	8-3"	8-7"	9-1"	9-5"
11-7/8"	NI-20	5-0"	5-4"	5-8"	6-2"	6-6"	6-9"	7-3"	7-7"	8-1"	8-5"	8-9"	9-3"
	NI-40x	5-0"	5-4"	5-8"	6-2"	6-6"	6-9"	7-3"	7-7"	8-1"	8-5"	8-9"	9-3"
	NI-60	6-0"	6-4"	6-8"	7-2"	7-6"	7-9"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"
	NI-80	6-0"	6-4"	6-8"	7-2"	7-6"	7-9"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"
14"	NI-20	6-0"	6-4"	6-8"	7-2"	7-6"	7-9"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"
	NI-40x	6-0"	6-4"	6-8"	7-2"	7-6"	7-9"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"
	NI-60	7-0"	7-4"	7-8"	8-2"	8-6"	8-9"	9-3"	9-7"	10-1"	10-5"	10-9"	11-3"
	NI-80	7-0"	7-4"	7-8"	8-2"	8-6"	8-9"	9-3"	9-7"	10-1"	10-5"	10-9"	11-3"
16"	NI-20	7-0"	7-4"	7-8"	8-2"	8-6"	8-9"	9-3"	9-7"	10-1"	10-5"	10-9"	11-3"
	NI-40x	7-0"	7-4"	7-8"	8-2"	8-6"	8-9"	9-3"	9-7"	10-1"	10-5"	10-9"	11-3"
	NI-60	8-0"	8-4"	8-8"	9-2"	9-6"	9-9"	10-3"	10-7"	11-1"	11-5"	11-9"	12-3"
	NI-80	8-0"	8-4"	8-8"	9-2"	9-6"	9-9"	10-3"	10-7"	11-1"	11-5"	11-9"	12-3"

1. Above table may be used for I-joist spacing of 24 inches on centre or less.

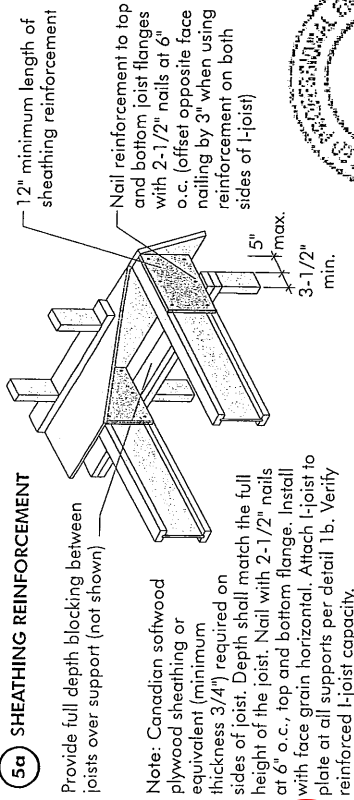
2. Duct chase opening location distance is measured from inside face of supports to centre of opening.

3. The above table is based on simple-span joists only. For other applications, contact your local distributor.

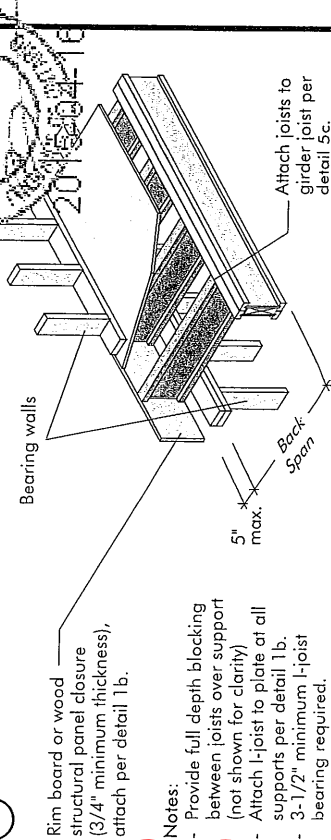
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480. For other applications, contact your local distributor.

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

5a SHEATHING REINFORCEMENT



5b SET-BACK DETAIL



5c SET-BACK CONNECTION

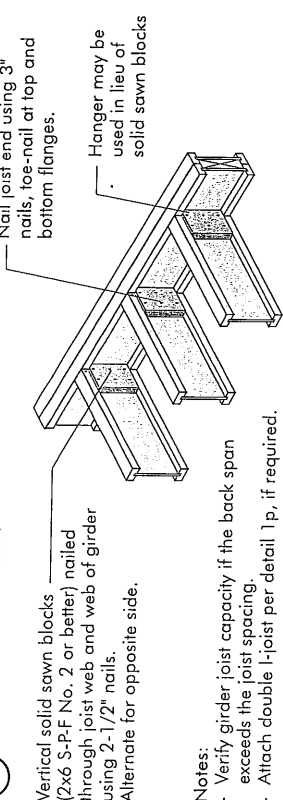
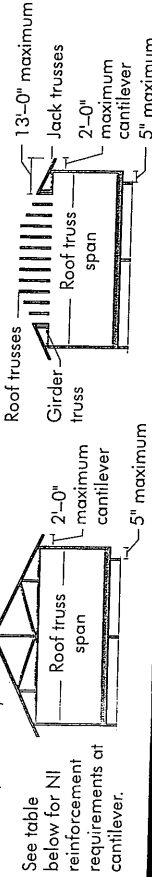


FIGURE 5 (continued)



BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

JOIST DEPTH (in.)	ROOF TRUSS SPAN (ft.)	ROOF LOADING, UNFACTORED											
		LL = 30 psf, DL = 15 psf						LL = 40 psf, DL = 15 psf					
		JOIST SPACING (in.)						JOIST SPACING (in.)					
		12	16	19.2	24	12	16	19.2	24	12	16	19.2	24
9-1/2"	26	1	X	X	X	2	X	X	X	2	X	X	X
	28	1	X	X	X	2	X	X	X	2	X	X	X
	30	1	X	X	X	2	X	X	X	2	X	X	X
	32	2	X	X	X	2	X	X	X	2	X	X	X
	34	2	X	X	X	2	X	X	X	2	X	X	X
	36	2	X	X	X	X	X	X	X	X	X	X	X
	26	N	2	X	X	1	X	X	X	1	X	X	X
	28	N	2	X	X	1	X	X	X	1	X	X	X
	30	1	2	X	X	1	X	X	X	2	X	X	X
	32	1	2	X	X	1	X	X	X	2	X	X	X
11-7/8"	34	1	2	X	X	2	X	X	X	2	X	X	X
	36	1	X	X	X	2	X	X	X	2	X	X	X
	38	1	X	X	X	2	X	X	X	2	X	X	X
	26	N	1	2	X	N	2	X	X	1	X	X	X
	28	N	1	X	X	1	2	X	X	1	X	X	X
14"	30	N	2	X	X	1	2	X	X	1	X	X	X
	32	N	2	X	X	1	2	X	X	1	X	X	X
	34	N	2	X	X	1	2	X	X	2	X	X	X
	36	1	2	X	X	1	2	X	X	2	X	X	X
	38	1	2	X	X	1	2	X	X	2	X	X	X
16"	40	1	2	X	X	2	X	X	X	2	X	X	X
	26	N	1	2	X	N	1	X	X	N	2	X	X
	28	N	1	2	X	N	2	X	X	1	2	X	X
	30	N	1	2	X	N	2	X	X	1	2	X	X
	32	N	1	2	X	N	2	X	X	1	2	X	X
	34	N	2	X	X	1	2	X	X	1	2	X	X
	36	N	2	X	X	1	2	X	X	1	2	X	X
	38	N	2	X	X	1	2	X	X	1	2	X	X
	40	N	2	X	X	1	2	X	X	2	2	X	X
	42	1	2	X	X	1	2	X	X	2	2	X	X

1. N = No reinforcement required.
- 2 = 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.
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 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.
5. 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.

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INSTALLING THE GLUED FLOOR SYSTEM

- 1. Wipe any mud, dirt, water, or ice from I-joist 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-joist. 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-joist 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 Joist Spacing (in)	Minimum Panel Thickness (in)	Nail Size and Type			Maximum Spacing of Fasteners	
		Common Wire or Spiral Nails	Ring Thread Nails or Screws	Staples	Edges	Intern. Supports
16	5/8	2"	1-3/4"	2"	6"	12"
20	5/8	2"	1-3/4"	2"	6"	12"
24	3/4	2"	1-3/4"	2"	6"	12"

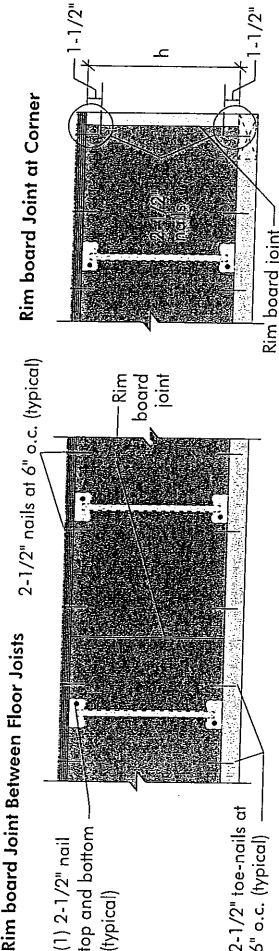
- 1. Fasteners of sheathing and subflooring shall conform to the above table.
- 2. Staples shall not be less than 1/16-inch in diameter or thickness, with not less than a 3/8-inch crown driven with the crown parallel to framing.
- 3. Flooring screws shall not be less than 1/8-inch in diameter.
- 4. Special 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.

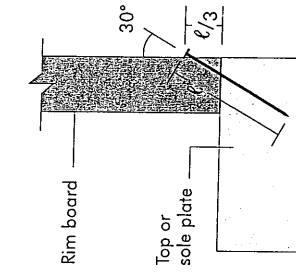
IMPORTANT NOTE:
Floor sheathing must be field glued to the I-joist flanges in order to achieve the maximum spans shown in this document. If sheathing is nailed only, I-joist spans must be verified with your local distributor.

RIM BOARD INSTALLATION DETAILS

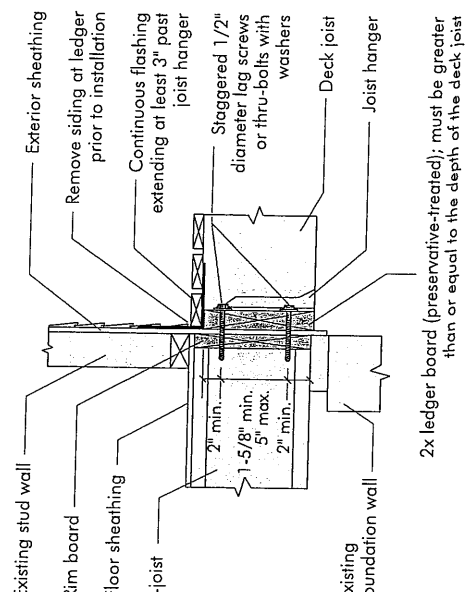
8a ATTACHMENT DETAILS WHERE RIM BOARDS ABUT



8b TOE-NAIL CONNECTION AT RIM BOARD



8c 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL

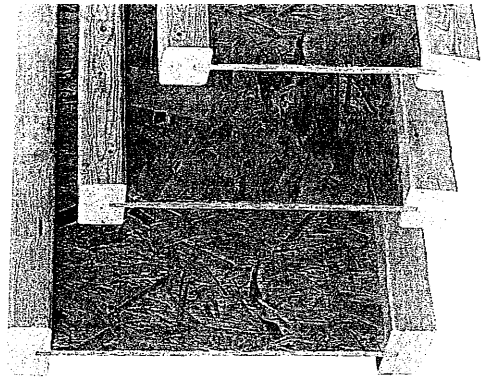




PRODUCT WARRANTY

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

Furthermore, Chantiers Chibougenau 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.



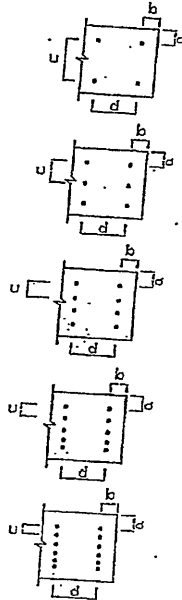
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MICRO CITY ENGINEERING SERVICES INC.

TEL: (519) 287 - 2242

R.R. #1, P.O. BOX 61, GLENCOE, ONTARIO, N0L 1M0

LVL HEADER AND CONVENTIONAL LUMBER NAILING DETAILS		
DETAIL NUMBER	NUMBER OF ROWS	SPACING (INCHES o/c) "d"
A	2	12
B	2	8
C	2	6
D	2	4
1A	3	12
1B	3	8
1C	3	6
1D	3	4
2A	4	12
2B	4	8
2C	4	6
2D	4	4
3A	5	12
3B	5	8
3C	5	6
3D	5	4
4A	6	12
4B	6	8
4C	6	6
4D	6	4



NOTES:

- (1) MINIMUM LUMBER EDGE DISTANCE "a" = 1"
- (2) MINIMUM LUMBER END DISTANCE "b" = 2"
- (3) MINIMUM NAIL ROW SPACING "c" = 2"
- (4) STAGGER NAILS "d/2" BETWEEN PLYS FOR MULTI-PLY MEMBERS (3 PLY OR MORE)
- (5) ALL NAILS ARE 3-1/2" ARDOX SPIRAL NAILS
- (6) DO NOT USE AIR-DRIVEN NAILS



DWG NO TAMN/001.14

STRUCTURAL
COMPONENT ONLY

TO BE USED ONLY
WITH BEAM CALES
BEARING THE
STAMP BELOW

PROVIDE NAILING
DETAIL # X SEE
DWG #TAMN1001-14

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