



Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

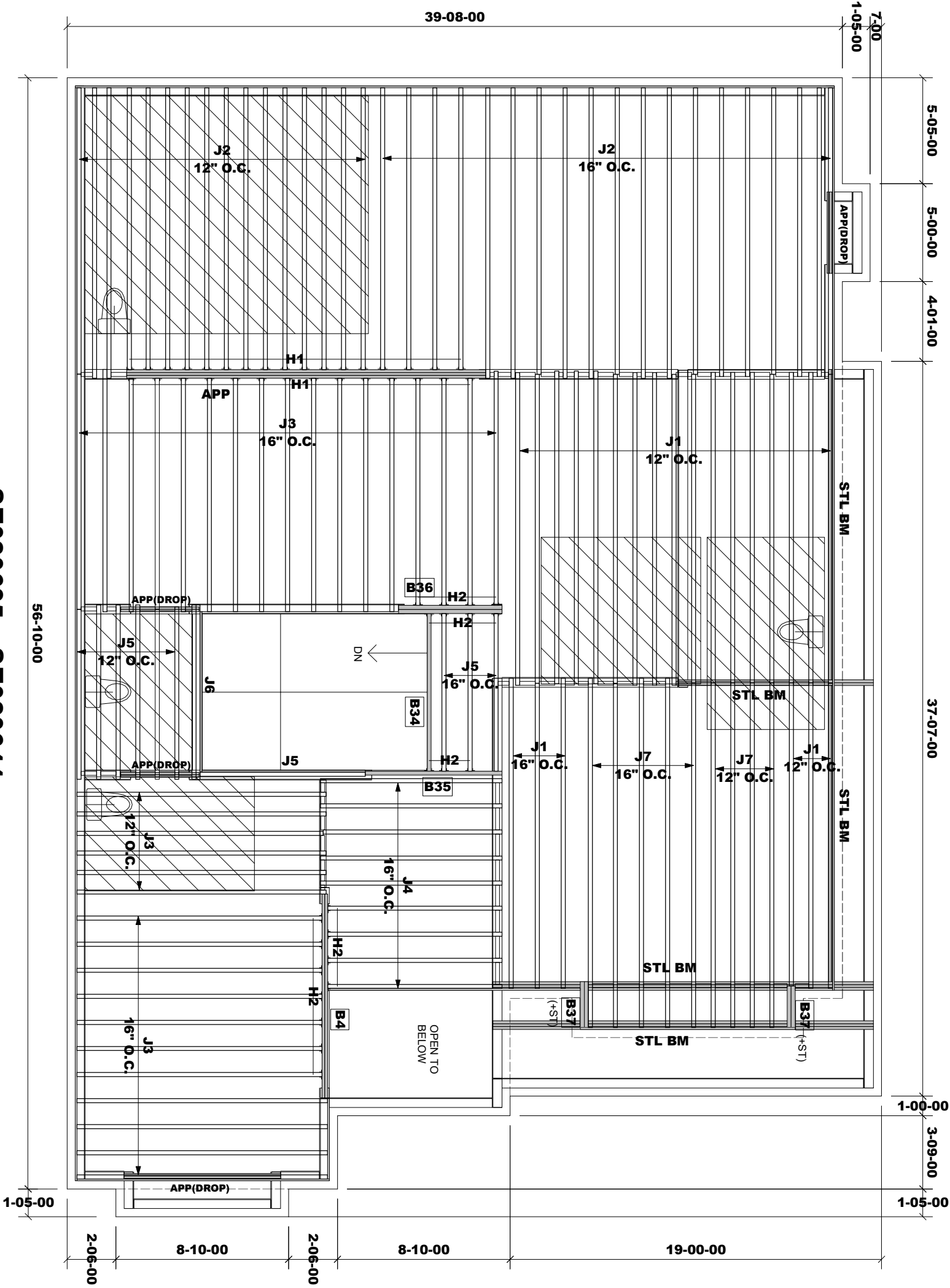
Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location: **Vaughan**
SalesPerson: **Derek**
Yard: **Home Lumber**

Sheet: **1 of 15**
Date: **2020/06/25**
Designer: **FC/NL**

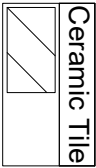
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SE020635 - SE020644

REVISIONS		
321531		106927
REV. NO.	DATE	P.L. NO.
1	2022/08/29	118899



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

Blocking panels are required over all interior supports

Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.

DESIGN LOADING:

LIVE LOAD = 40 PSF

DEAD LOAD = 15 PSF

DEAD LOAD @TILE = 20 PSF

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN

BBO - BEAM BY OTHERS

Connector Summary			
PlotID	Qty	Manuf	Product
H1	31		LF2511
H2	25		LT251188

Products			
PlotID	Length	Product	Piles Net Qty
B4	11-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2 2
B34	9-00-00	11 7/8" NI-20	1 1
B35	7-00-00	11 7/8" NI-20	1 1
B36	6-00-00	11 7/8" NI-20	2 2
B37	3-00-00	11 7/8" NI-20	2 4
Bk1	54-00-00	11 7/8" NI-20	1 1
Ca1	211-00-00	1 1/8" x 11 7/8" Rim Board	1 1
J1	16-00-00	11 7/8" NI-20	1 23
J2	15-00-00	11 7/8" NI-20	1 35
J3	13-00-00	11 7/8" NI-20	1 34
J4	10-00-00	11 7/8" NI-20	1 9
J5	9-00-00	11 7/8" NI-20	1 10
J6	9-00-00	11 7/8" NI-20	2 2
J7	18-00-00	11 7/8" NI-40x	1 9

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.A

+ OPT. LOGGIA & REAR UPG.



Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

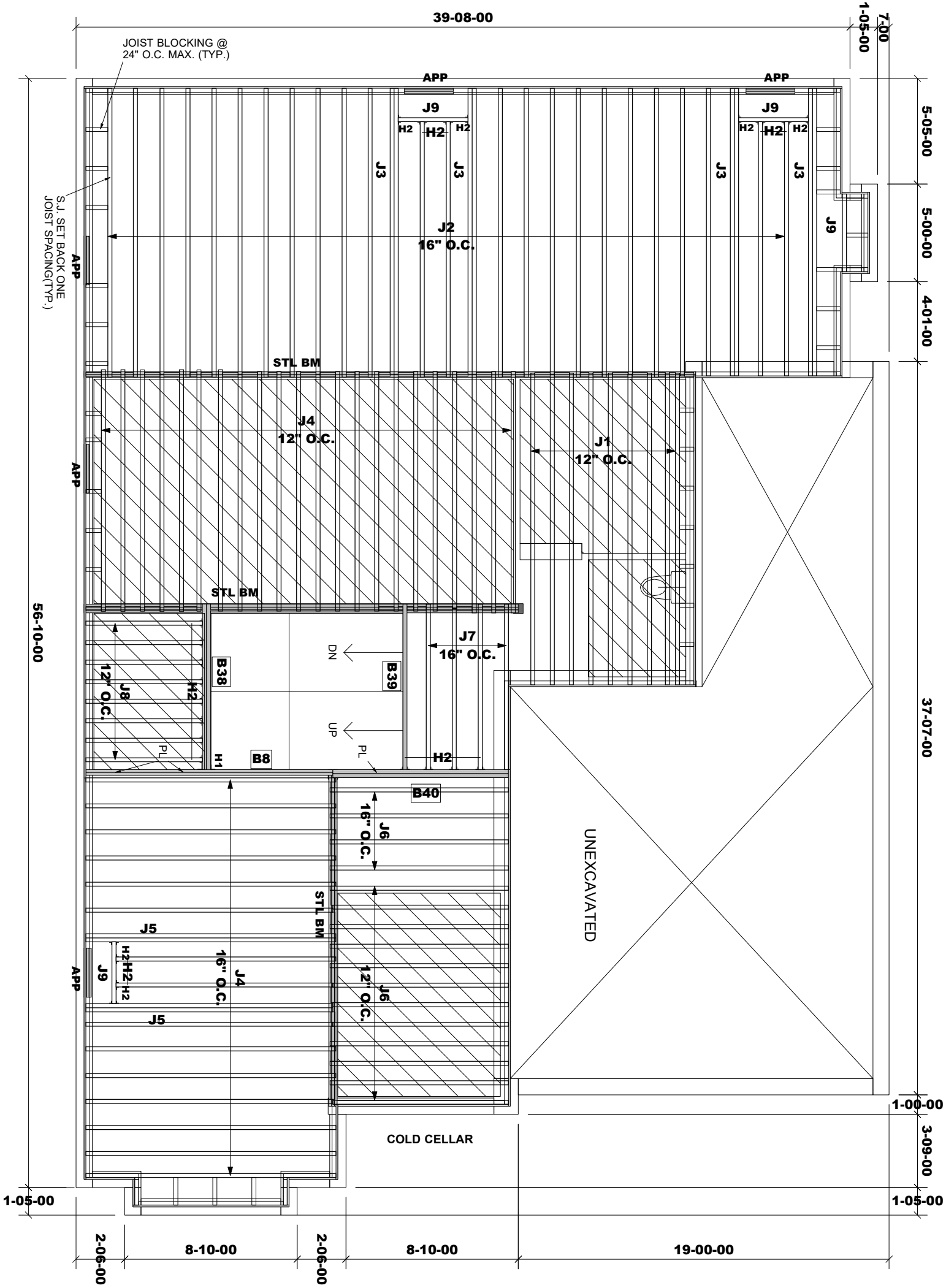
Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location: **Vaughan**
SalesPerson: **Derek**
Yard: **Home Lumber**

Sheet: **2 of 15**
Date: **2020/06/25**
Designer: **FC/NL**

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Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NI-20	2	2
B39	9-00-00	11 7/8" NI-20	1	1
B40	9-00-00	11 7/8" NI-20	2	2
Bk1	77-00-00	11 7/8" NI-20	1	1
Ca1	205-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NI-20	1	9
J2	15-00-00	11 7/8" NI-20	1	24
J3	15-00-00	11 7/8" NI-20	2	8
J4	13-00-00	11 7/8" NI-20	1	37
J5	13-00-00	11 7/8" NI-20	2	4
J6	10-00-00	11 7/8" NI-20	1	16
J7	9-00-00	11 7/8" NI-20	1	4
J8	6-00-00	11 7/8" NI-20	1	8
J9	4-00-00	11 7/8" NI-20	1	4

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	24		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

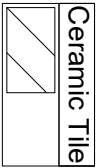
RIMBOARD

1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction
Details Nordic Joist) NS-DC3 latest edition.



Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.A
+ OPT. LOGGIA & REAR UP.G.
+ W.O.D. CONDITION

REVISIONS			
321531			106927
REV. NO.	DATE	P.L. NO.	
1	2022/08/29	118899	



Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

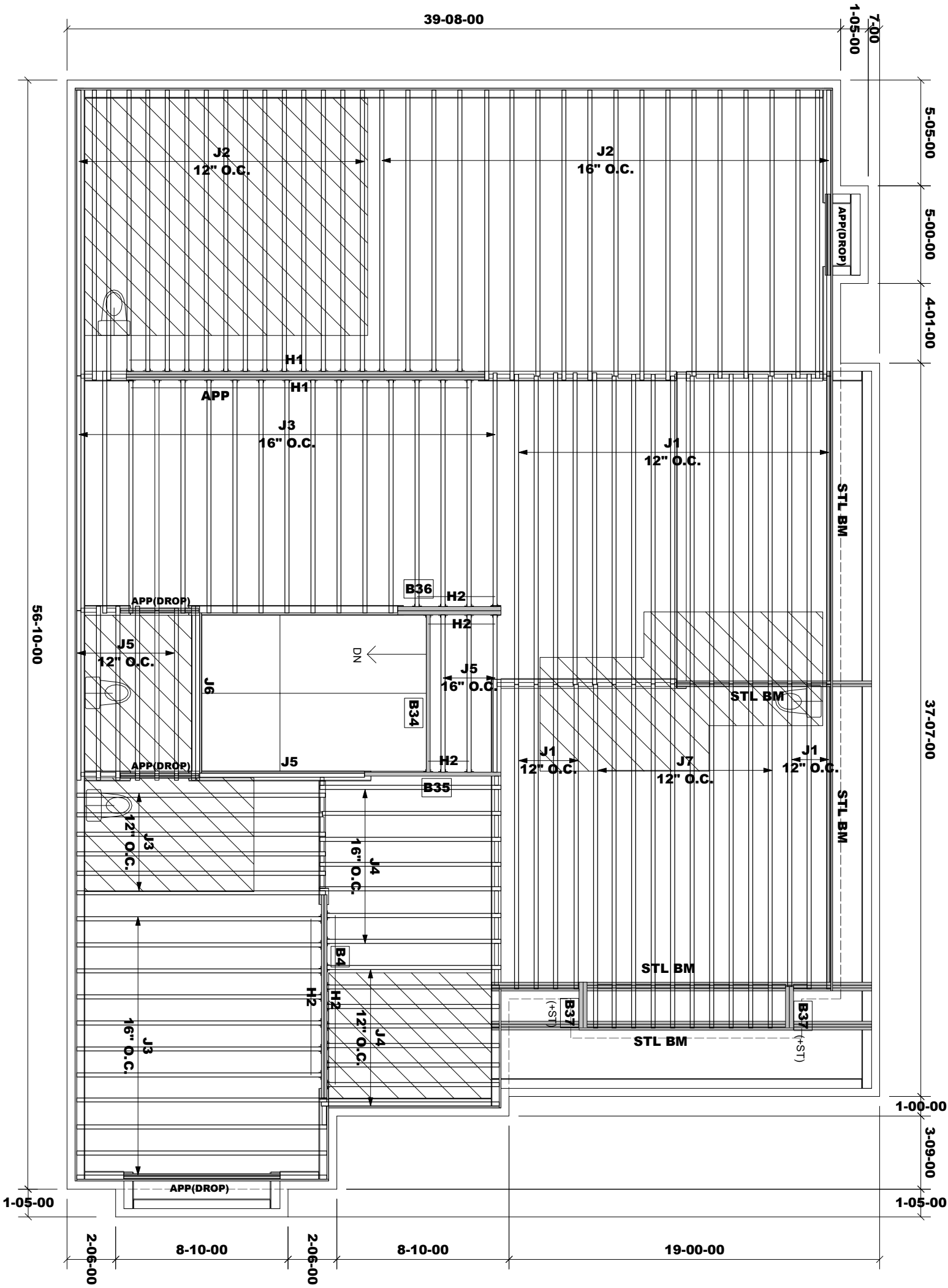
Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location: **Vaughan**
SalesPerson: **Derek**
Yard: **Home Lumber**

Sheet: **3 of 15**
Date: **2020/06/25**
Designer: **FC/NL**

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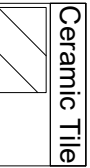


Products				
PlotID	Length	Product	Piles	Net Qty
B4	11-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B34	9-00-00	11 7/8" NI-20	1	1
B35	7-00-00	11 7/8" NI-20	1	1
B36	6-00-00	11 7/8" NI-20	2	2
B37	3-00-00	11 7/8" NI-20	2	4
BK1	57-00-00	11 7/8" NI-20	1	1
Ca1	216-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NI-20	1	24
J2	15-00-00	11 7/8" NI-20	1	35
J3	13-00-00	11 7/8" NI-20	1	34
J4	10-00-00	11 7/8" NI-20	1	15
J5	9-00-00	11 7/8" NI-20	1	10
J6	9-00-00	11 7/8" NI-20	2	2
J7	18-00-00	11 7/8" NI-40x	1	10

Connector Summary			
PlotID	Qty	Manuf	Product
H1	31		LF2511
H2	30		LT251188

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

DESIGN LOADING:
LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF



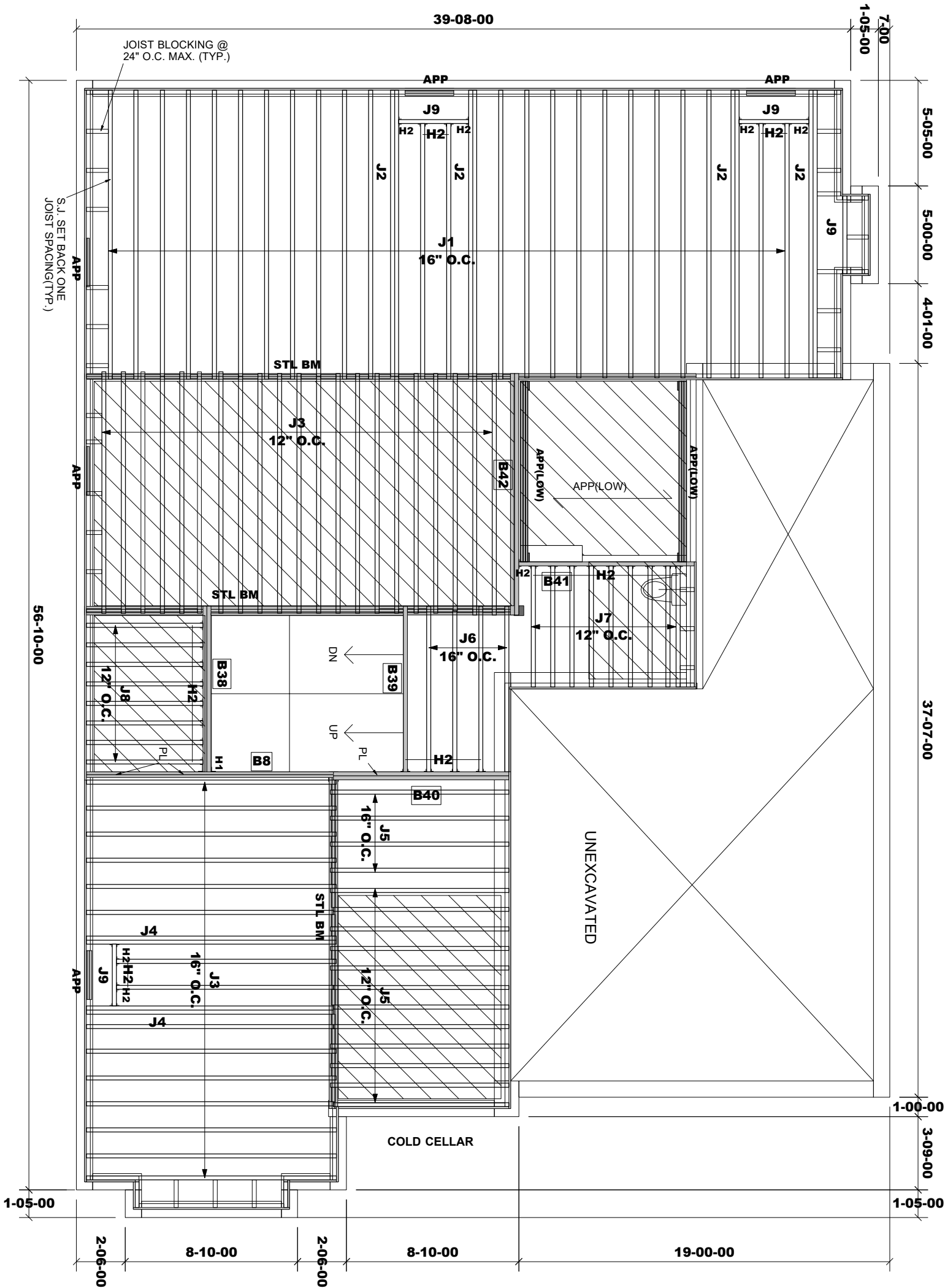
Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.
Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.A
W/ALT. 5-BEDROOM
+ OPT. LOGGIA & REAR UPG.

REVISIONS		
321531		106927
REV. NO.	DATE	P.L. NO.
1	2022/08/29	118899



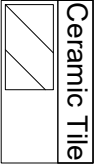
Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NI-20	2	2
B39	9-00-00	11 7/8" NI-20	1	1
B40	9-00-00	11 7/8" NI-20	2	2
B41	9-00-00	11 7/8" NI-20	1	1
B42	13-00-00	11 7/8" NI-20	2	2
Bk1	68-00-00	11 7/8" NI-20	1	1
Ca1	205-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	24
J2	15-00-00	11 7/8" NI-20	2	8
J3	13-00-00	11 7/8" NI-20	1	36
J4	13-00-00	11 7/8" NI-20	2	4
J5	10-00-00	11 7/8" NI-20	1	16
J6	9-00-00	11 7/8" NI-20	1	4
J7	7-00-00	11 7/8" NI-20	1	9
J8	6-00-00	11 7/8" NI-20	1	8
J9	4-00-00	11 7/8" NI-20	1	4

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	34		LT251188

DESIGN LOADING:
LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.
Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction
Details Nordic Joist) NS-DC3 latest edition.



First Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.A
W/SUNKEN MUDDRM
+ OPT. LOGGIA & REAR UPG.
+ W.O.D. CONDITION

REVISIONS			
321531			106927
REV. NO.	DATE	PL. NO.	
1	2022/08/29	118899	



Job Track: 45147	Builder: Gold Park	Location: Vaughan	Sheet: 4 of 15
Layout ID: 321531-348238	Project: Pine Valley	SalesPerson: Derek	Date: 2020/06/25
Plan Log: 118899	Model: 5009	Yard: Home Lumber	Designer: FC/NL
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Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NI-20	2	2
B39	9-00-00	11 7/8" NI-20	1	1
B40	9-00-00	11 7/8" NI-20	2	2
Bk1	79-00-00	11 7/8" NI-20	1	1
Ca1	205-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NI-20	1	9
J2	15-00-00	11 7/8" NI-20	1	28
J3	13-00-00	11 7/8" NI-20	1	37
J4	13-00-00	11 7/8" NI-20	2	4
J5	10-00-00	11 7/8" NI-20	1	16
J6	9-00-00	11 7/8" NI-20	1	4
J7	6-00-00	11 7/8" NI-20	1	8
J8	4-00-00	11 7/8" NI-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	16		LT251188

DESIGN LOADING:
LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

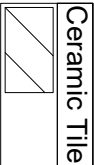
RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports

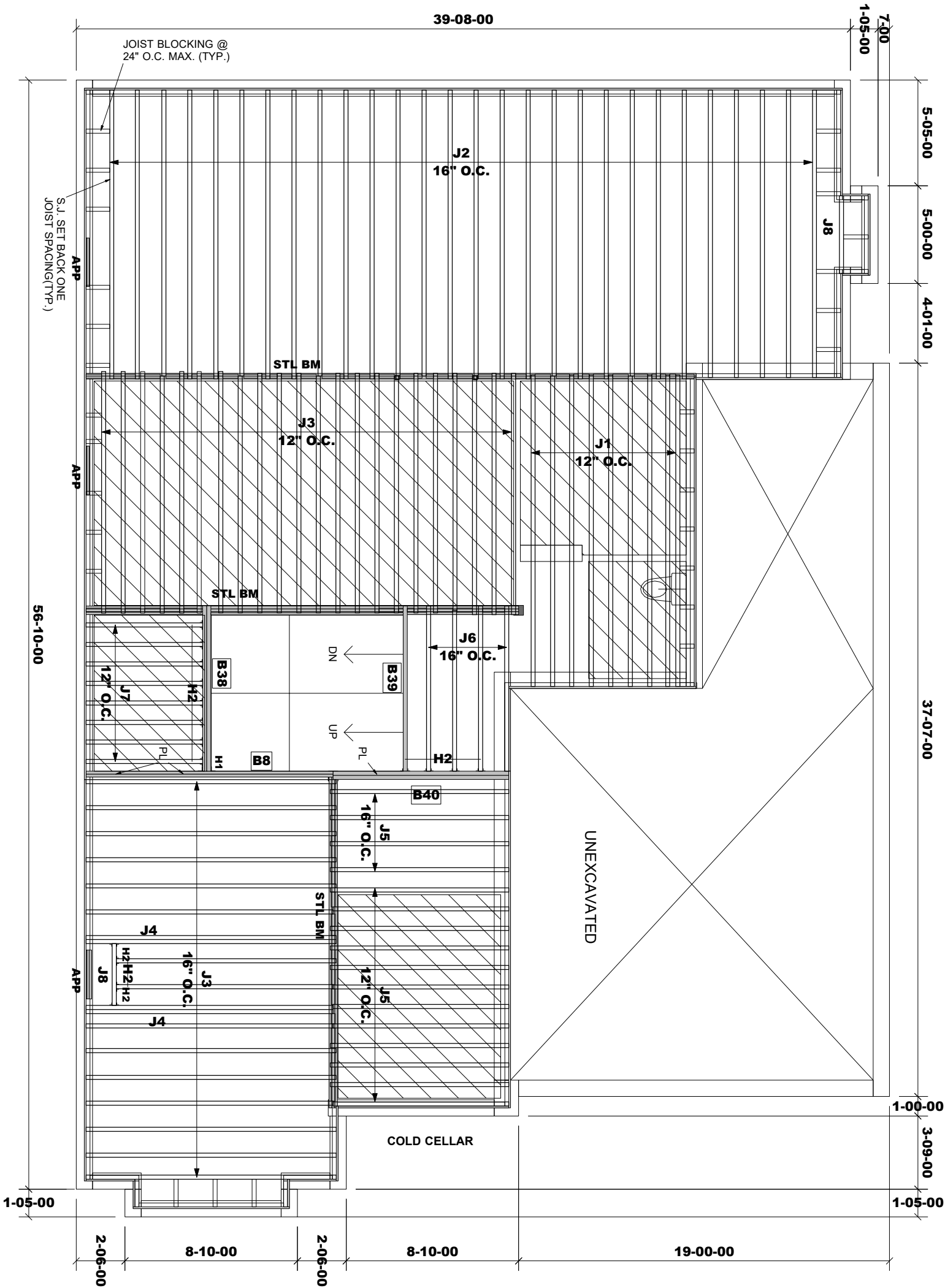
Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.

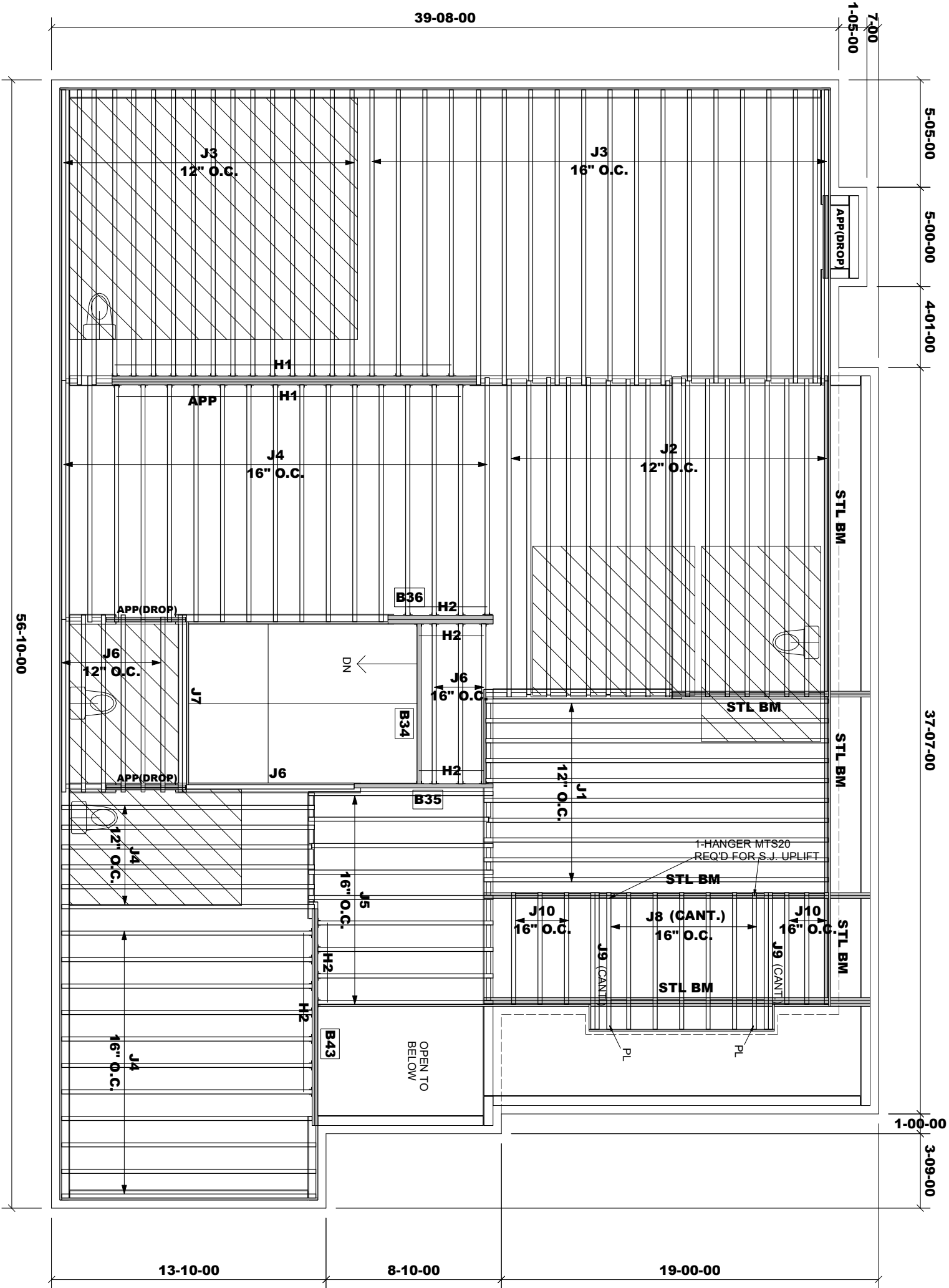


Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.A
W/L.O.D. & W.O.B. COND.
+ OPT. LOGGIA & REAR UPG.



Job Track: 45147	Builder: Gold Park	Sheet: 5 of 15
Layout ID: 321531-348238	Location: Vaughan	DATE: 2022/08/30
Plan Log: 118899	SalesPerson: Derek	Designer: NL
	Model: 5009	Yard: Home Lumber
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Products				
PlotID	Length	Product	Piles	Net Qty
B34	9-00-00	11 7/8" NI-20	1	1
B35	7-00-00	11 7/8" NI-20	1	1
B36	6-00-00	11 7/8" NI-20	2	2
B43	11-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
Bk1	68-00-00	11 7/8" NI-20	1	1
Ca1	213-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	18-00-00	11 7/8" NI-20	1	10
J2	16-00-00	11 7/8" NI-20	1	17
J3	15-00-00	11 7/8" NI-20	1	35
J4	13-00-00	11 7/8" NI-20	1	34
J5	10-00-00	11 7/8" NI-20	1	9
J6	9-00-00	11 7/8" NI-20	1	10
J7	9-00-00	11 7/8" NI-20	2	2
J8	7-00-00	11 7/8" NI-20	1	7
J9	7-00-00	11 7/8" NI-20	2	4
J10	6-00-00	11 7/8" NI-20	1	6

Connector Summary			
PlotID	Qty	Manuf	Product
H1	31		LF2511
H2	28		LT251188

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

Provide I-Joist Blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Blocking panels are required over all interior supports. Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.

REVISIONS		
321531		106927
REV. NO.	DATE	PL. NO.
1	2022/08/29	118899

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.B
+ OPT. LOGGIA & REAR UPG.



Job Track: **45147**

Layout ID: **321531-348238**

Plan Log: **118899**

Builder: **Gold Park**

Project: **Pine Valley**

Model: **5009**

Location: **Vaughan**

SalesPerson: **Derek**

Yard: **Home Lumber**

Sheet: **6 of 15**

Date: **2020/06/25**

Designer: **FC/NL**

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Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

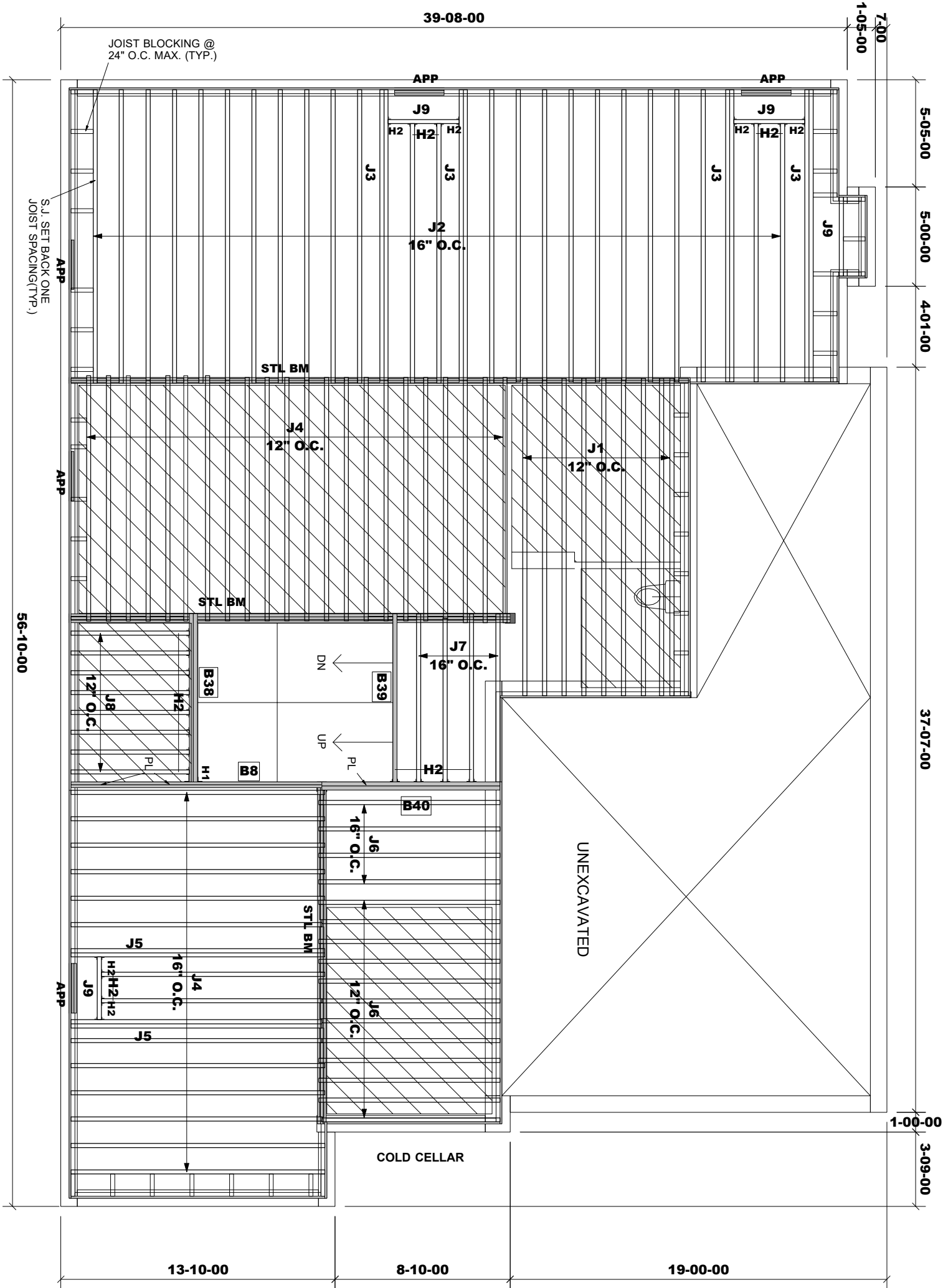
Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location: **Vaughan**
SalesPerson: **Derek**
Yard: **Home Lumber**

Sheet: **7 of 15**
Date: **2020/06/25**
Designer: **FC/NL**

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Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NI-20	2	2
B39	9-00-00	11 7/8" NI-20	1	1
B40	9-00-00	11 7/8" NI-20	2	2
Bk1	79-00-00	11 7/8" NI-20	1	1
Ca1	202-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NI-20	1	9
J2	15-00-00	11 7/8" NI-20	1	24
J3	15-00-00	11 7/8" NI-20	2	8
J4	13-00-00	11 7/8" NI-20	1	36
J5	13-00-00	11 7/8" NI-20	2	4
J6	10-00-00	11 7/8" NI-20	1	16
J7	9-00-00	11 7/8" NI-20	1	4
J8	6-00-00	11 7/8" NI-20	1	8
J9	4-00-00	11 7/8" NI-20	1	4

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	24		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN

BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports

Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.

First Floor Framing

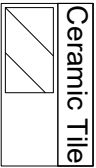
Do not scale - refer to architectural plans for dimensions

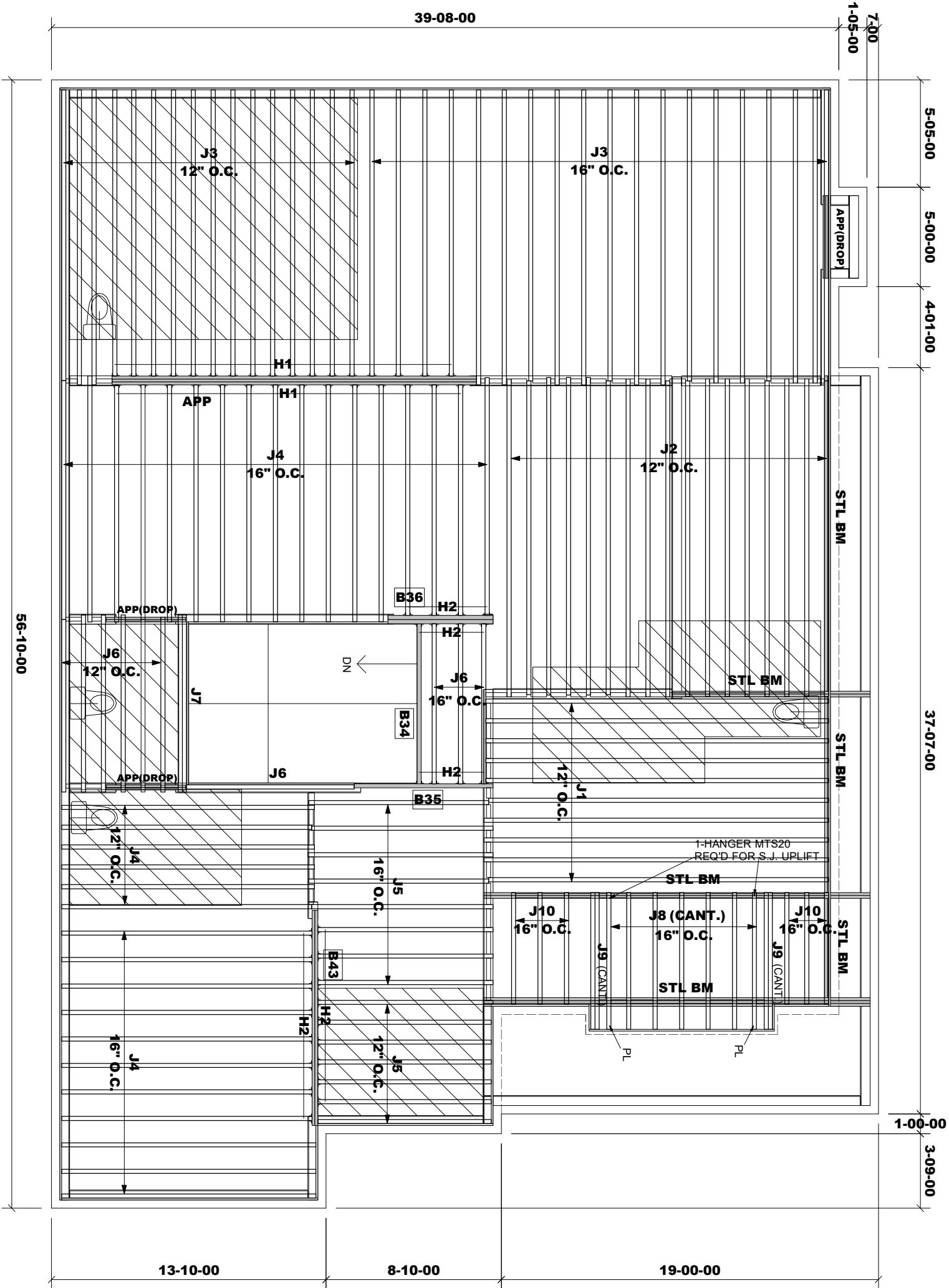
MODEL: 5009 - EL.B

+ OPT. LOGGIA & REAR UPG.

+ W.O.D. CONDITION

REVISIONS			
321531			106927
REV. NO.	DATE	P.L. NO.	
1	2022/08/29	118899	





Products				
PlotID	Length	Product	Pieces	Net Qty
B34	9'-00"-00	11 7/8" NI-20	1	1
B35	7'-00"-00	11 7/8" NI-20	1	1
B36	6'-00"-00	11 7/8" NI-20	2	2
B43	11'-00"-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
Bk1	68'-00"-00	11 7/8" NI-20	1	1
Ca1	219'-00"-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	18'-00"-00	11 7/8" NI-20	1	10
J2	16'-00"-00	11 7/8" NI-20	1	17
J3	15'-00"-00	11 7/8" NI-20	1	35
J4	13'-00"-00	11 7/8" NI-20	1	34
J5	10'-00"-00	11 7/8" NI-20	1	15
J6	9'-00"-00	11 7/8" NI-20	1	10
J7	9'-00"-00	11 7/8" NI-20	2	2
J8	7'-00"-00	11 7/8" NI-20	1	7
J9	7'-00"-00	11 7/8" NI-20	2	4
J10	6'-00"-00	11 7/8" NI-20	1	6

Connector Summary			
PlotID	Qty	Manuf	Product
H1	31		LF2511
H2	34		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @ TILE = 20 PSF

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN

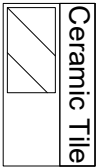
BBO - BEAM BY OTHERS

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

Provide I-Joist Blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Blocking panels are required over all interior supports. Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.



Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.B
W/ALT. 5-BEDROOM
+ OPT. LOGGIA & REAR UPG.

REVISIONS			
321531			106927
REV. NO.	DATE	P.L. NO.	
1	2022/08/30	118899	



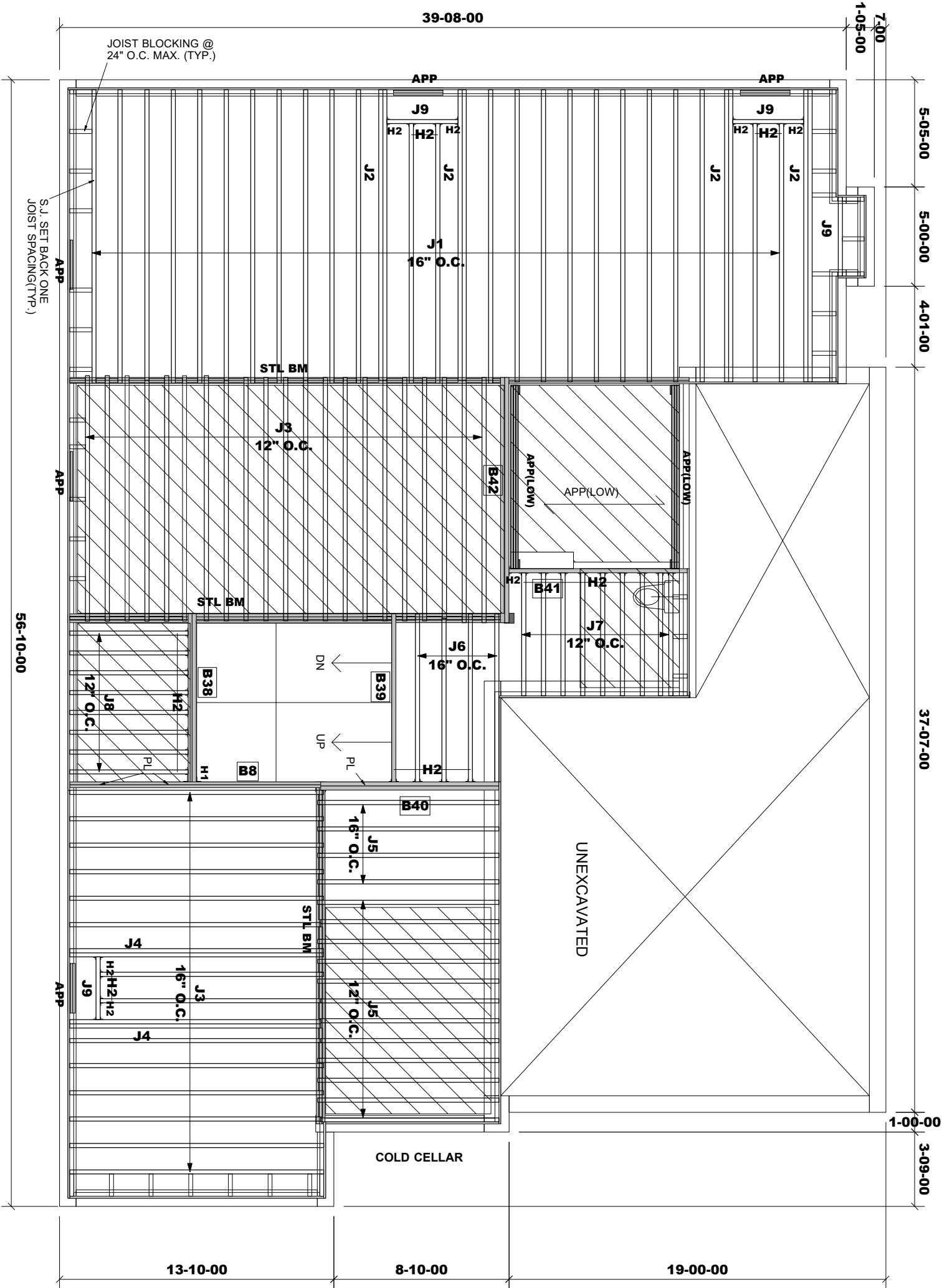
Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location: **Vaughan**
SalesPerson: **Derek**
Yard: **Home Lumber**

Sheet: **8 of 15**
Date: **2020/06/25**
Designer: **FC/NL**

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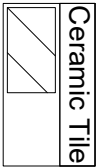
Products				
PlotID	Length	Product	Plies	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NI-20	2	2
B39	9-00-00	11 7/8" NI-20	1	1
B40	9-00-00	11 7/8" NI-20	2	2
B41	9-00-00	11 7/8" NI-20	1	1
B42	13-00-00	11 7/8" NI-20	2	2
Bk1	70-00-00	11 7/8" NI-20	1	1
Ca1	202-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	24
J2	15-00-00	11 7/8" NI-20	2	8
J3	13-00-00	11 7/8" NI-20	1	35
J4	13-00-00	11 7/8" NI-20	2	4
J5	10-00-00	11 7/8" NI-20	1	16
J6	9-00-00	11 7/8" NI-20	1	4
J7	7-00-00	11 7/8" NI-20	1	9
J8	6-00-00	11 7/8" NI-20	1	8
J9	4-00-00	11 7/8" NI-20	1	4

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	34		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS



Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.
Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction
Details Nordic Joist) NS-DC3 latest edition.

First Floor Framing

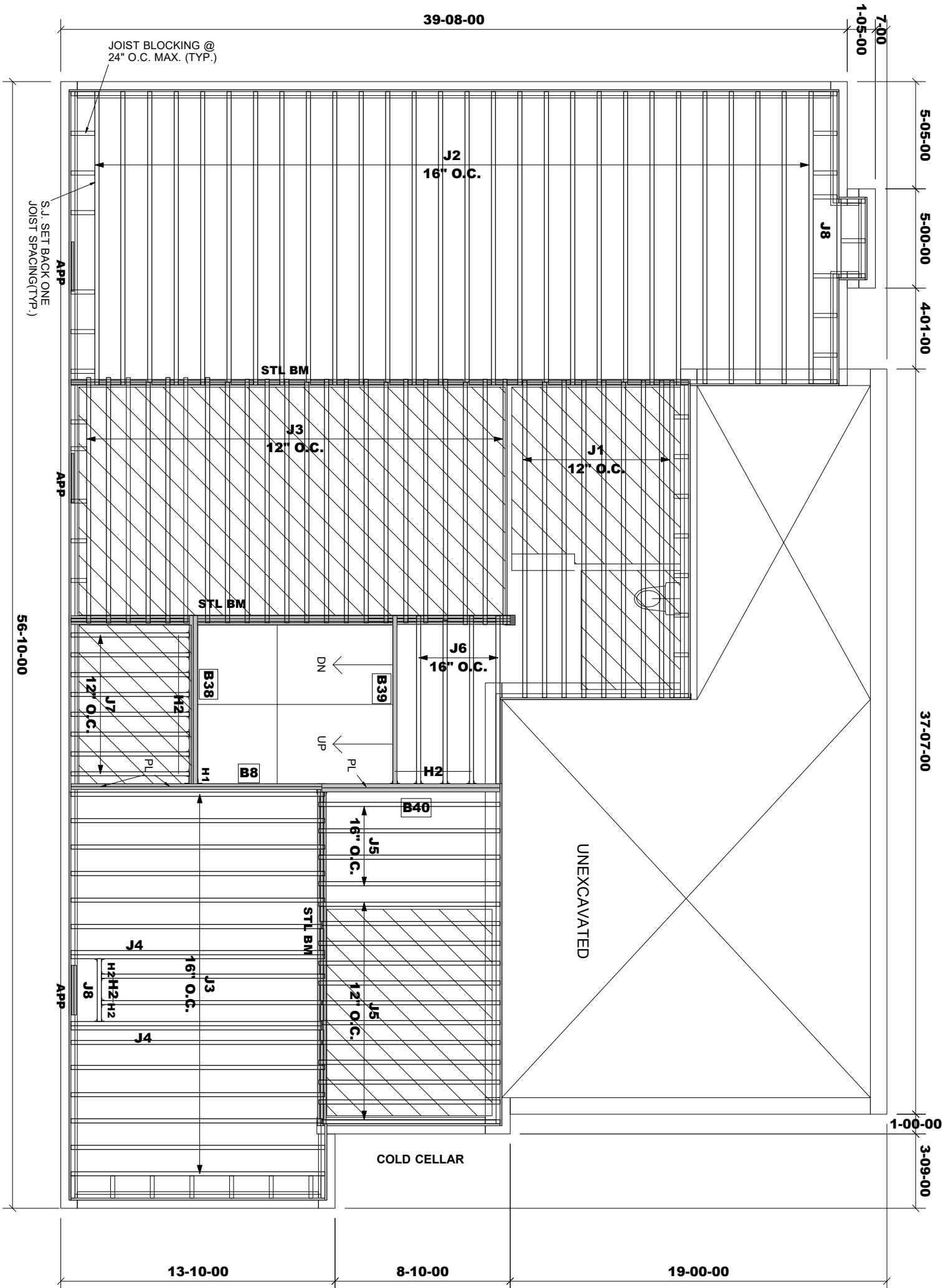
Do not scale - refer to architectural plans for dimensions

REVISIONS			
321531			106927
REV. NO.	DATE	PL. NO.	
1	2022/08/29	118899	

MODEL: 5009 - EL.B
W/SUNKEN MUDDRM
+ OPT. LOGGIA & REAR UPG.
+ W.O.D. CONDITION



Job Track: 45147	Builder: Gold Park	Location: Vaughan	Sheet: 9 of 15
Layout ID: 321531-348238	Project: Pine Valley	SalesPerson: Derek	Date: 2020/06/25
Plan Log: 118899	Model: 5009	Yard: Home Lumber	Designer: FC/NL
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Mitek V. 8.5.3.233			



Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NL-20	2	2
B39	9-00-00	11 7/8" NL-20	1	1
B40	9-00-00	11 7/8" NL-20	2	2
Bk1	81-00-00	11 7/8" NL-20	1	1
Ca1	202-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NL-20	1	9
J2	15-00-00	11 7/8" NL-20	1	28
J3	13-00-00	11 7/8" NL-20	1	36
J4	13-00-00	11 7/8" NL-20	2	4
J5	10-00-00	11 7/8" NL-20	1	16
J6	9-00-00	11 7/8" NL-20	1	4
J7	6-00-00	11 7/8" NL-20	1	8
J8	4-00-00	11 7/8" NL-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	16		LT251188

DESIGN LOADING:
LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD
 1- 1/8" X 11 7/8" O.S.B.
 SUBFLOOR - 3/4" NAILED & GLUED**
 APP - AS PER PLAN
 BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports

Squash blocks are required under concentrated loads

Refer to manufacturer's specifications:

(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.

First Floor Framing

Do not scale - refer to architectural plans for dimensions

**MODEL: 5009 - EL.B
W/L.O.D. & W.O.B. COND.
+ OPT. LOGGIA & REAR UPG.**

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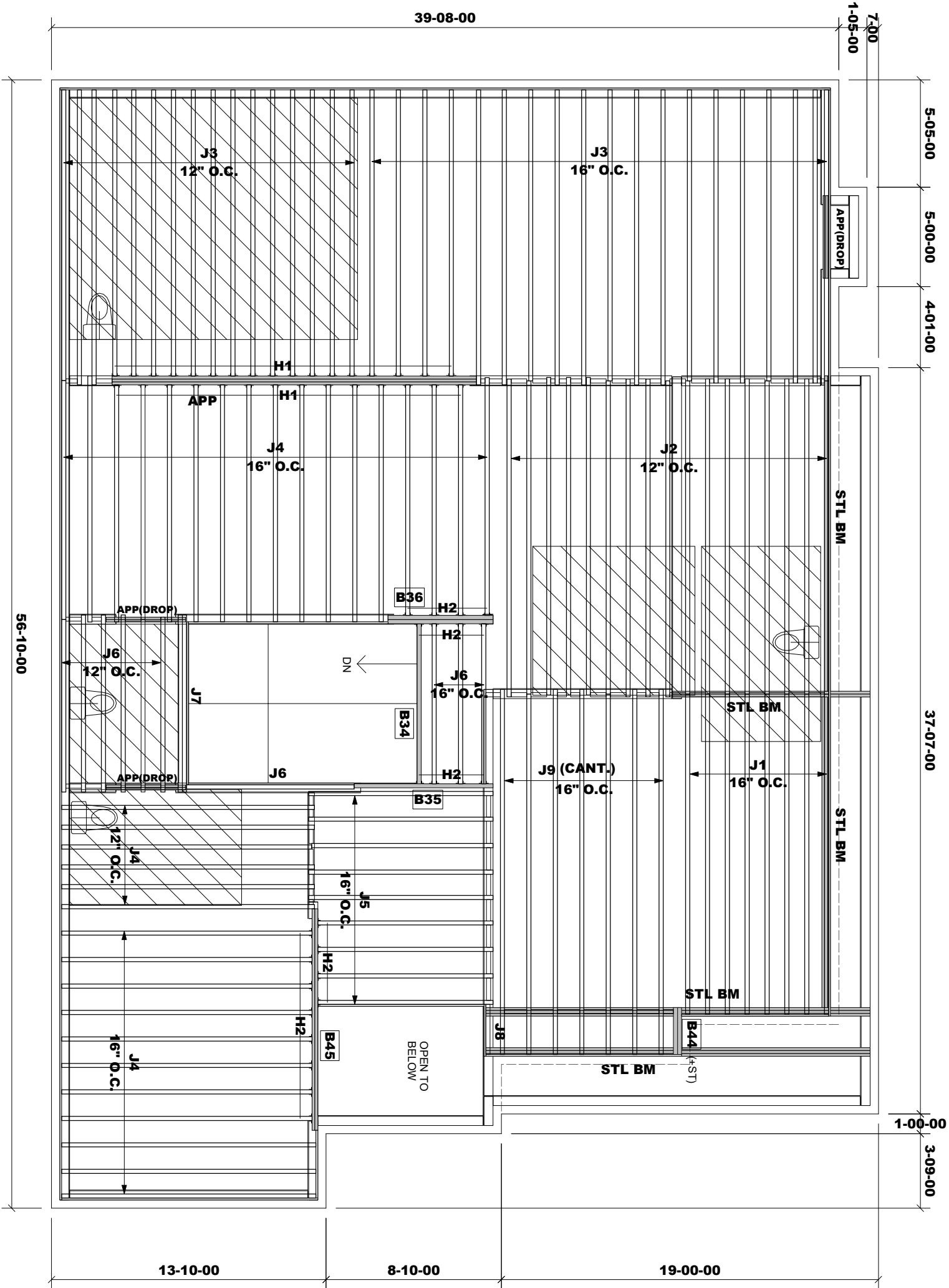
Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

Builder:	Gold Park
Project:	Pine Valley
Model:	5009

Location:	Vaughan
SalesPerson:	Derek
Yard:	Home Lumber

Sheet:	10 of 15
Date:	2022/08/30
Designer:	NL

Mitek V. 8.5.3.233



Products				
PlotID	Length	Product	Pieces	Net Qty
B34	9'-00"-00	11 7/8" NI-20	1	1
B35	7'-00"-00	11 7/8" NI-20	1	1
B36	6'-00"-00	11 7/8" NI-20	2	2
B44	3'-00"-00	11 7/8" NI-20	2	2
B45	12'-00"-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
Bk1	53'-00"-00	11 7/8" NI-20	1	1
Ca1	213'-00"-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	17'-00"-00	11 7/8" NI-20	1	8
J2	16'-00"-00	11 7/8" NI-20	1	17
J3	15'-00"-00	11 7/8" NI-20	1	35
J4	13'-00"-00	11 7/8" NI-20	1	34
J5	10'-00"-00	11 7/8" NI-20	1	9
J6	9'-00"-00	11 7/8" NI-20	1	10
J7	9'-00"-00	11 7/8" NI-20	2	2
J8	3'-00"-00	11 7/8" NI-20	1	1
J9	19'-00"-00	11 7/8" NI-40x	1	7

Connector Summary			
PlotID	Qty	Manuf	Product
H1	31		LF2511
H2	27		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

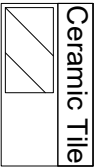
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

Provide I-Joist Blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Blocking panels are required over all interior supports. Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.



Ceramic Tile

REVISIONS			
321531			106927
REV. NO.	DATE	PL. NO.	
1	2022/08/30	118899	

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.C
+ OPT. LOGGIA



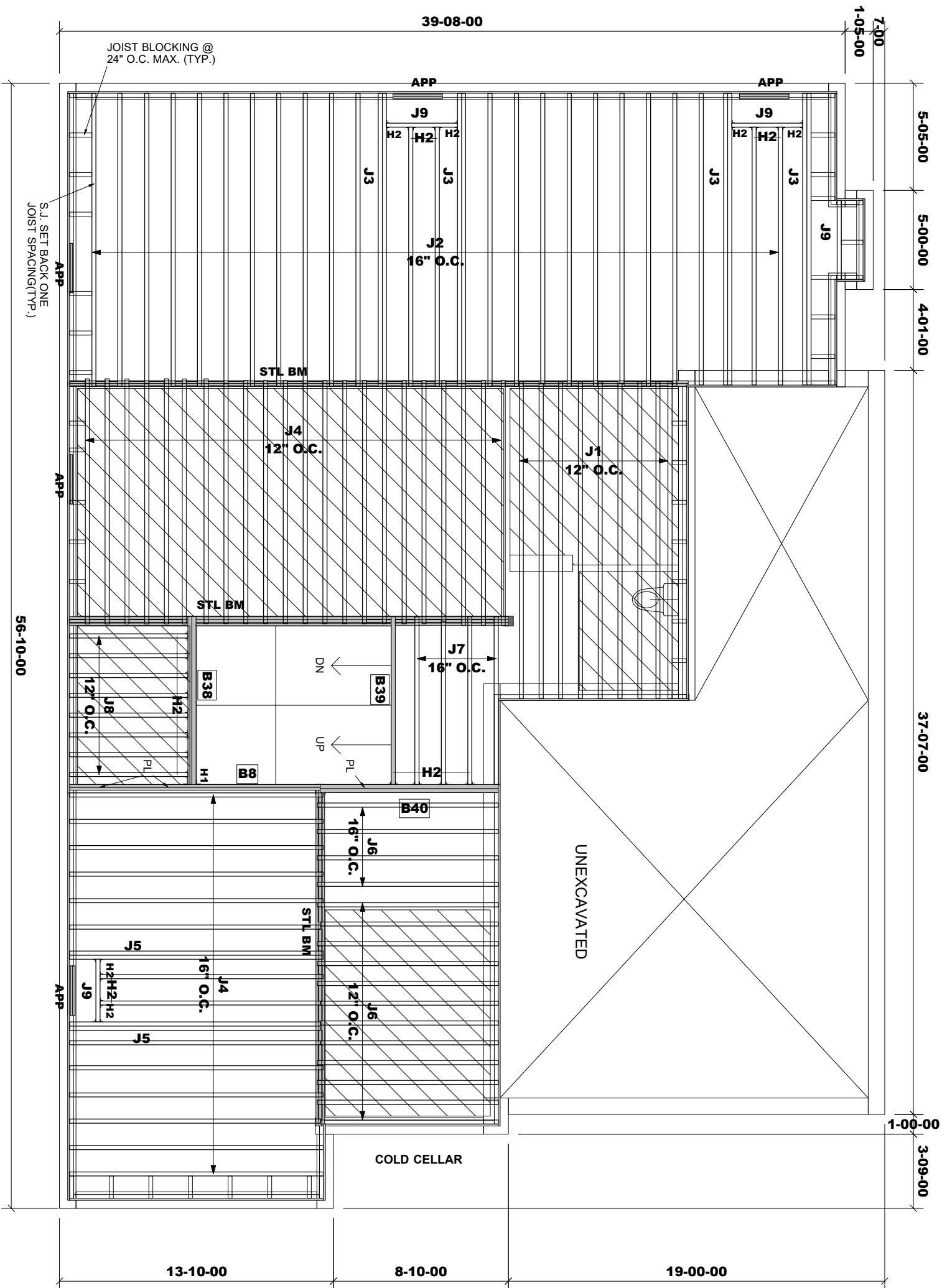
Job Track: 45147
Layout ID: 321531-348238
Plan Log: 118899

Builder: Gold Park
Project: Pine Valley
Model: 5009

Location: Vaughan
SalesPerson: Derek
Yard: Home Lumber

Sheet: 11 of 15
Date: 2020/06/25
Designer: FC/NL

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Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NL-20	2	2
B39	9-00-00	11 7/8" NL-20	1	1
B40	9-00-00	11 7/8" NL-20	2	2
Bk1	78-00-00	11 7/8" NL-20	1	1
Ca1	202-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NL-20	1	9
J2	15-00-00	11 7/8" NL-20	1	24
J3	15-00-00	11 7/8" NL-20	2	8
J4	13-00-00	11 7/8" NL-20	1	36
J5	13-00-00	11 7/8" NL-20	2	4
J6	10-00-00	11 7/8" NL-20	1	16
J7	9-00-00	11 7/8" NL-20	1	4
J8	6-00-00	11 7/8" NL-20	1	8
J9	4-00-00	11 7/8" NL-20	1	4

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	24		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction
Details Nordic Joist) NS-DC3 latest edition.

First Floor Framing

Do not scale - refer to architectural plans for dimensions

REVISIONS		
	321531	106927
REV. NO.	DATE	P.L. NO.
1	2022/08/30	118899

MODEL: 5009 - EL.C
+ OPT. LOGGIA
+ W.O.D. CONDITION



Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

Builder: **Gold Park**

Project: **Pine Valley**

Model: **5009**

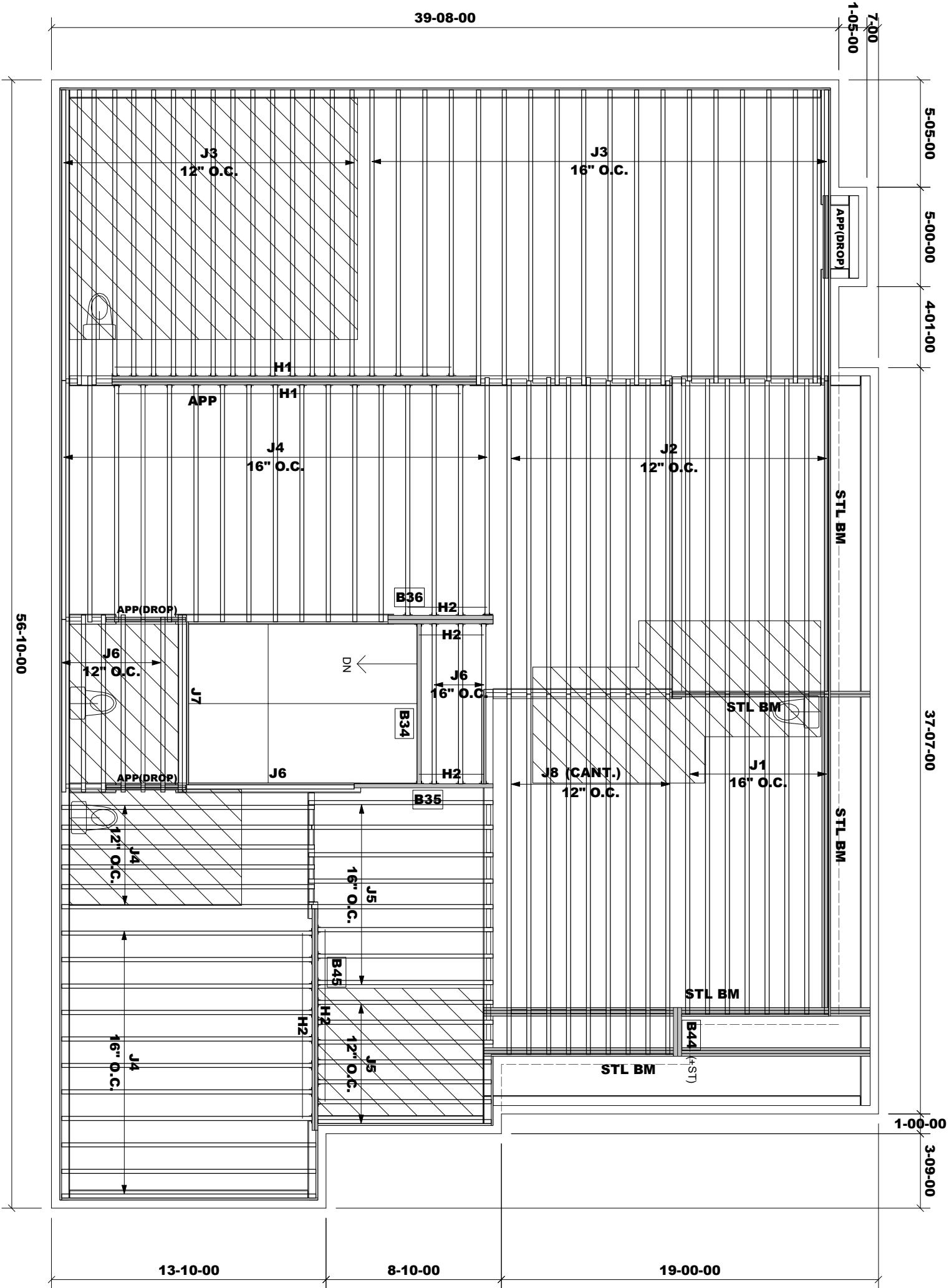
Location:	Vaughan
SalesPerson:	Derek
Yard:	Home Lumber

Sheet: **12 of 15**

Date: **2020/06/25**

Designer: **FC/NL**

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Products				
PlotID	Length	Product	Pieces	Net Qty
B34	9'-00'-00	11 7/8" NI-20	1	1
B35	7'-00'-00	11 7/8" NI-20	1	1
B36	6'-00'-00	11 7/8" NI-20	2	2
B44	3'-00'-00	11 7/8" NI-20	2	2
B45	12'-00'-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
Bk1	54'-00'-00	11 7/8" NI-20	1	1
Ca1	214'-00'-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	17'-00'-00	11 7/8" NI-20	1	8
J2	16'-00'-00	11 7/8" NI-20	1	17
J3	15'-00'-00	11 7/8" NI-20	1	35
J4	13'-00'-00	11 7/8" NI-20	1	34
J5	10'-00'-00	11 7/8" NI-20	1	15
J6	9'-00'-00	11 7/8" NI-20	1	10
J7	9'-00'-00	11 7/8" NI-20	2	2
J8	19'-00'-00	11 7/8" NI-40x	1	9

Connector Summary			
PlotID	Qty	Manuf	Product
H1	31		LF2511
H2	32		LT251188

DESIGN LOADING:
LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

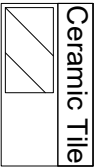
Ceramic tile application as per O.B.C. 9.30.6

Provide I-Joist Blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Blocking panels are required over all interior supports

Squash blocks are required under concentrated loads.

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.



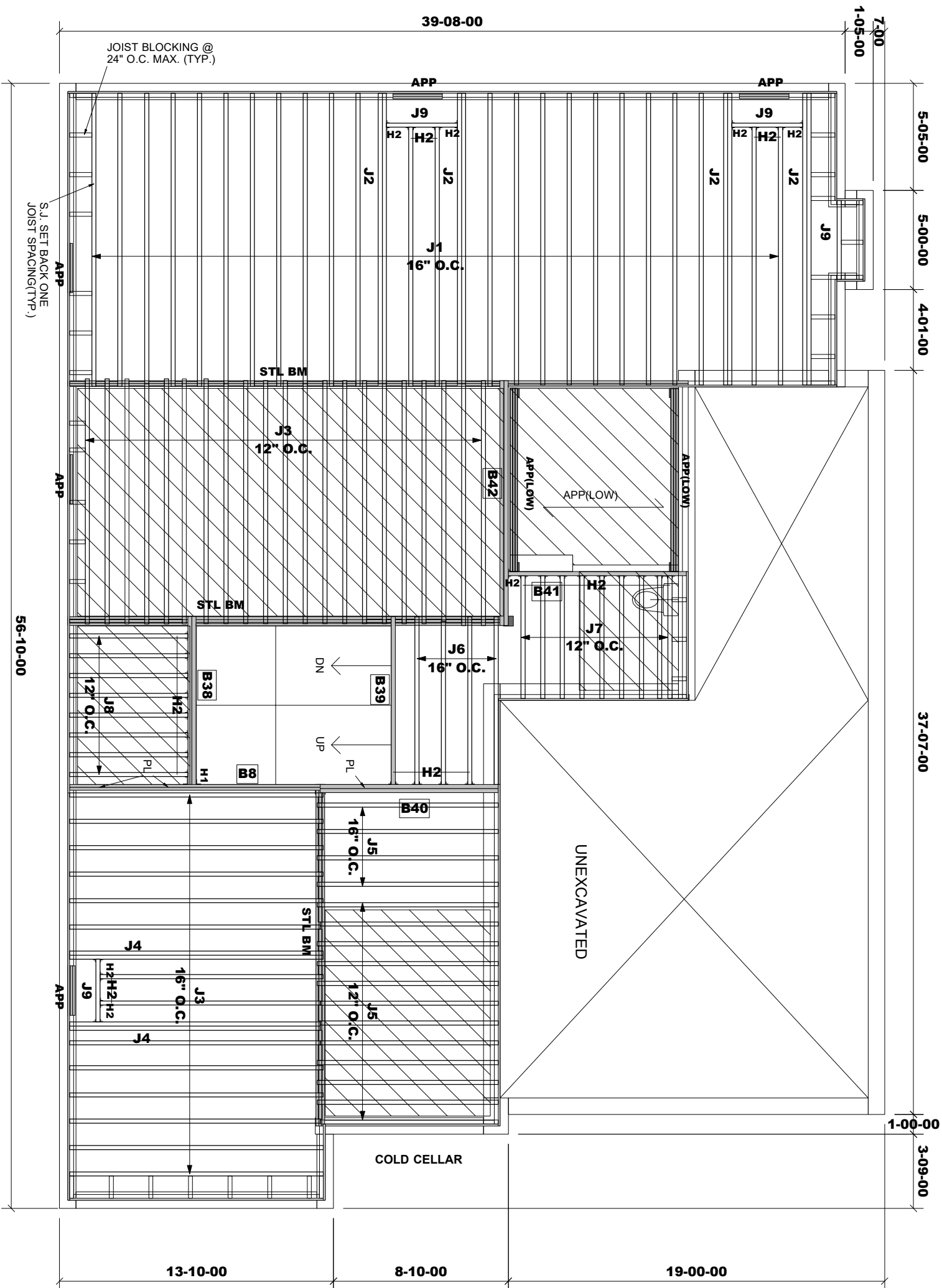
REVISIONS			
321531			106927
REV. NO.	DATE		P.L. NO.
1	2022/08/30		118899

MODEL: 5009 - EL.C
W/ALT. 5-BEDROOM
+ OPT. LOGGIA

Do not scale - refer to architectural plans for dimensions



Job Track: 45147	Builder: Gold Park	Location: Vaughan	Sheet: 13 of 15
Layout ID: 321531-348238	Project: Pine Valley	SalesPerson: Derek	Date: 2020/06/25
Plan Log: 118899	Model: 5009	Yard: Home Lumber	Designer: FC/NL
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Mitek V. 8.5.3.233			



Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" Nl-20	2	2
B39	9-00-00	11 7/8" Nl-20	1	1
B40	9-00-00	11 7/8" Nl-20	2	2
B41	9-00-00	11 7/8" Nl-20	1	1
B42	13-00-00	11 7/8" Nl-20	2	2
Bk1	70-00-00	11 7/8" Nl-20	1	1
Ca1	202-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" Nl-20	1	24
J2	15-00-00	11 7/8" Nl-20	2	8
J3	13-00-00	11 7/8" Nl-20	1	35
J4	13-00-00	11 7/8" Nl-20	2	4
J5	10-00-00	11 7/8" Nl-20	1	16
J6	9-00-00	11 7/8" Nl-20	1	4
J7	7-00-00	11 7/8" Nl-20	1	9
J8	6-00-00	11 7/8" Nl-20	1	8
J9	4-00-00	11 7/8" Nl-20	1	4

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	34		LT251188

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED***
APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads

Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction
Details Nordic Joist) NS-DC3 latest edition.

First Floor Framing

Do not scale - refer to architectural plans for dimensions

REVISIONS		
	321531	106927
REV. NO.	DATE	PL. NO.
1	2022/08/30	118899

**MODEL: 5009 - EL.C
W/SUNKEN MUDDRM
+ OPT. LOGGIA
+ W.O.D. CONDITION**



Job Track: 45147

Layout ID: 321531-348238

Plan Log: 118899

Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location:	Vaughan
SalesPerson:	Derek
Yard:	Home Lumber

Sheet: **14 of 15**
Date: **2020/06/25**
Designer: **FC/NL**

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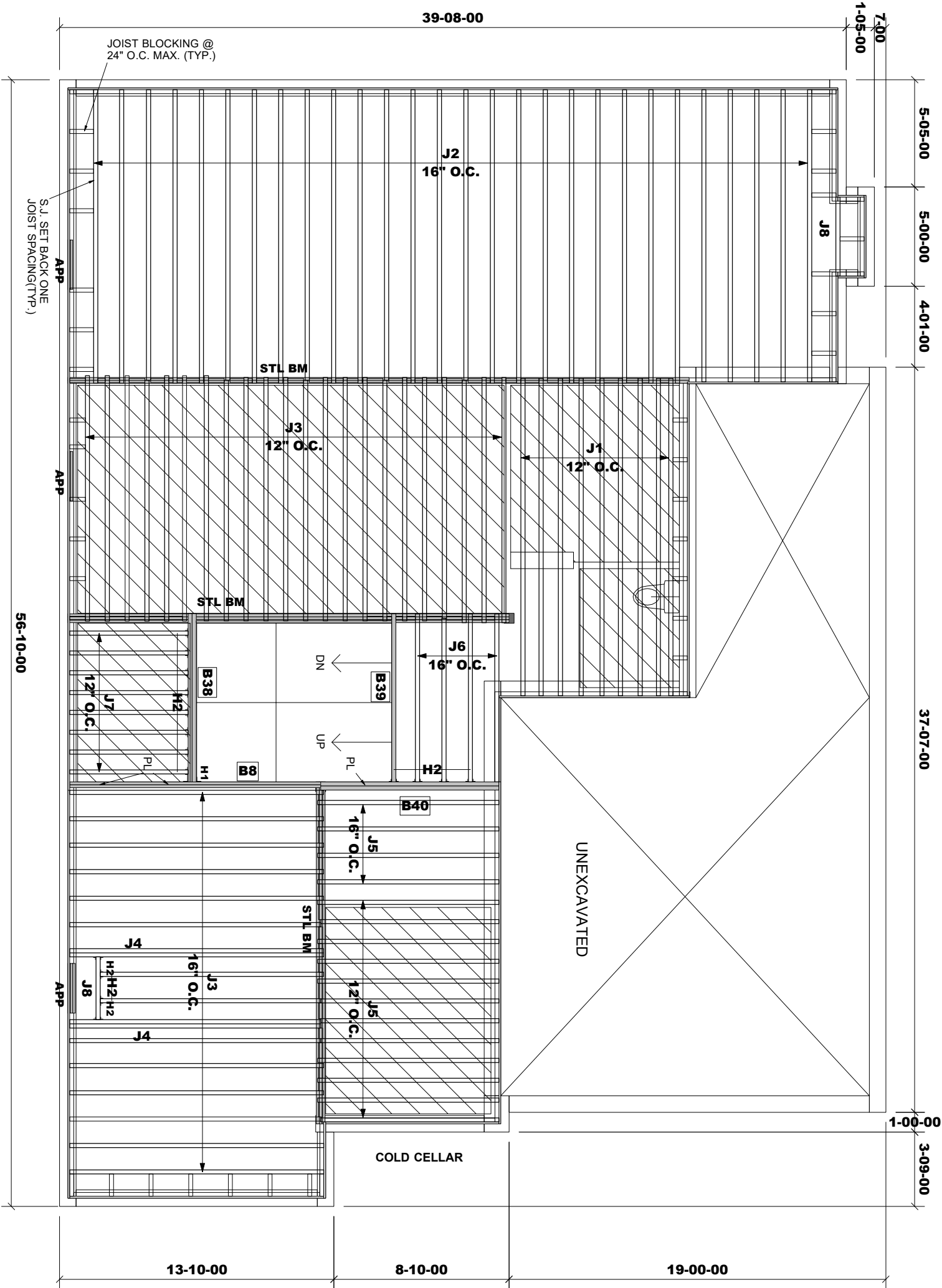
Job Track: **45147**
Layout ID: **321531-348238**
Plan Log: **118899**

Builder: **Gold Park**
Project: **Pine Valley**
Model: **5009**

Location: **Vaughan**
SalesPerson: **Derek**
Yard: **Home Lumber**

Sheet: **15 of 15**
Date: **2022/08/30**
Designer: **NL**

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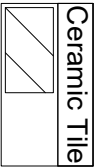
Products				
PlotID	Length	Product	Piles	Net Qty
B8	13-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B38	9-00-00	11 7/8" NI-20	2	2
B39	9-00-00	11 7/8" NI-20	1	1
B40	9-00-00	11 7/8" NI-20	2	2
Bk1	80-00-00	11 7/8" NI-20	1	1
Ca1	202-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	16-00-00	11 7/8" NI-20	1	9
J2	15-00-00	11 7/8" NI-20	1	28
J3	13-00-00	11 7/8" NI-20	1	36
J4	13-00-00	11 7/8" NI-20	2	4
J5	10-00-00	11 7/8" NI-20	1	16
J6	9-00-00	11 7/8" NI-20	1	4
J7	6-00-00	11 7/8" NI-20	1	8
J8	4-00-00	11 7/8" NI-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HU310-2
H2	16		LT251188

DESIGN LOADING:
LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED**
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.
Refer to manufacturer's specifications:
(Nordic Engineered Wood Products - Construction Details Nordic Joist) NS-DC3 latest edition.



Do not scale - refer to architectural plans for dimensions

MODEL: 5009 - EL.C
W/L.O.D. & W.O.B. COND.
+ OPT. LOGGIA



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

2nd Floor - Supply/BOM/Flush Beams/B1(156658) (Flush Beam)

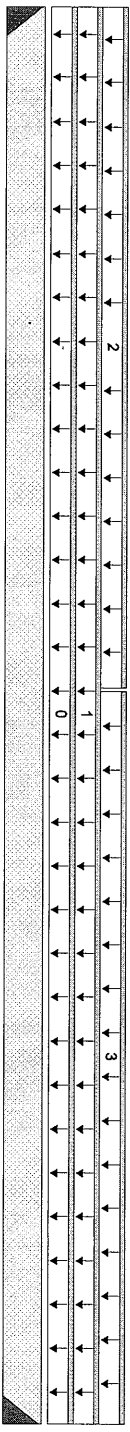
Dry | 1 span | No cant.

June 25, 2020 16:25:36

BC CALCO® Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: 2nd Floor - Supply/BOM/Flush Beams/B1(156658)
Specifier:
Designer:
Company:

CCMC 12472-R



08-00-04

B1

B2

Total Horizontal Product Length = 08-00-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	778 / 0	354 / 0		
B2, 2"	285 / 0	223 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-00-04	Top	1.00	0.65	1.00	1.15	00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	08-00-04	Top	17	9			n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-00-00	03-10-04	Top	240	90			n/a
3	W2(48362)	Unf. Lin. (lb/ft)	L	03-10-08	08-00-04	Top	26				n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2344 ft-lbs	17696 ft-lbs	13.2%	1	03-01-02
End Shear	1013 lbs	7232 lbs	14.0%	1	01-01-14
Total Load Deflection	L/999 (0.035")	n/a	n/a	4	03-09-04
Live Load Deflection	L/999 (0.022")	n/a	n/a	5	03-08-03
Max Defl.	0.035"	n/a	n/a	4	03-09-04
Span / Depth	7.9				

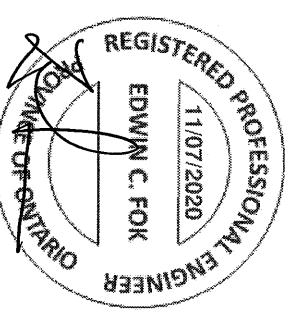
Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Hanger	2" x 1-3/4"	1610 lbs	n/a	37.7%	HUS1.81/10
B2 Hanger	2" x 1-3/4"	707 lbs	n/a	16.6%	HUS1.81/10

Cautions

Header for the hanger HUS1.81/10 is a Single 1-3/4" x 11-7/8" LVL Beam.
Hanger model HUS1.81/10 and seat length were input by the user. F

Notes

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 CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



Disclosure

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BC CALCO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

SE020635



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

2nd Floor - Supply/BOM/Flush Beams\B2(i57061) (Flush Beam)

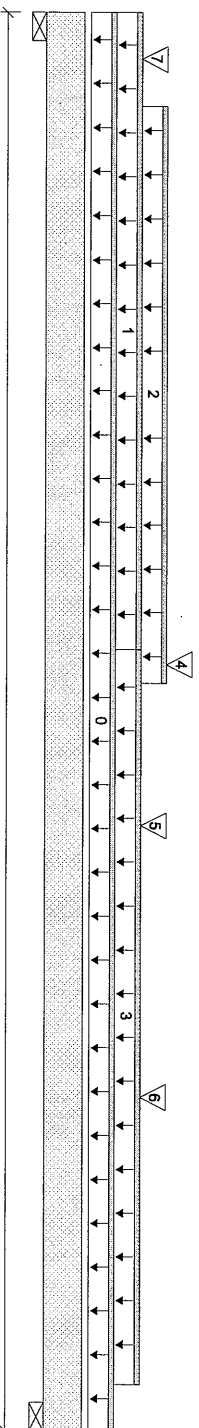
Dry | 1 span | No cant.

June 25, 2020 16:25:36

BC CALC® Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.rmmld
Description: 2nd Floor - Supply/BOM/Flush Beams\B2(i57061)
Specifier:
Designer:
Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	319 / 0	371 / 0		
B2, 5-1/2"	464 / 0	311 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	06-11-08	Top	6				00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-01-08	Top	14	7			n/a
2	W1(48361)	Unf. Lin. (lb/ft)	L	00-05-08	03-03-08	Top	26				n/a
3	FC1 Floor Material	Unf. Lin. (lb/ft)	L	03-01-08	06-08-13	Top	13	6			n/a
4	B1(i56658)	Conc. Pt. (lbs)	L	03-02-06	03-02-06	Top	293	225			n/a
5	J6(i57284)	Conc. Pt. (lbs)	L	03-11-14	03-11-14	Top	178	89			n/a
6	J6(i57510)	Conc. Pt. (lbs)	L	05-03-14	05-03-14	Top	218	109			n/a
7	13(i48354)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top	92				n/a

Controls Summary

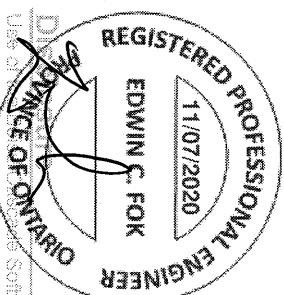
Pos. Moment	2140 ft-lbs	17696 ft-lbs	12.1%	1	03-02-06
End Shear	1040 lbs	7232 lbs	14.4%	1	05-06-02
Total Load Deflection	L/999 (0.021")	n/a	n/a	4	03-05-10
Live Load Deflection	L/999 (0.012")	n/a	n/a	5	03-05-10
Max Defl.	0.021"	n/a	n/a	4	03-05-10
Span / Depth	6.4				

Bearing Supports

B1	Wall/Plate	3-1/2" x 1-3/4"	942 lbs	25.0%	12.6%	Spruce-Pine-Fir
B2	Wall/Plate	5-1/2" x 1-3/4"	1085 lbs	18.3%	9.2%	Spruce-Pine-Fir

Notes

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.
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 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCJ®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

SE020626

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
2nd Floor - Supply/BOMFflush Beams\B3(i57177) (Flush Beam)

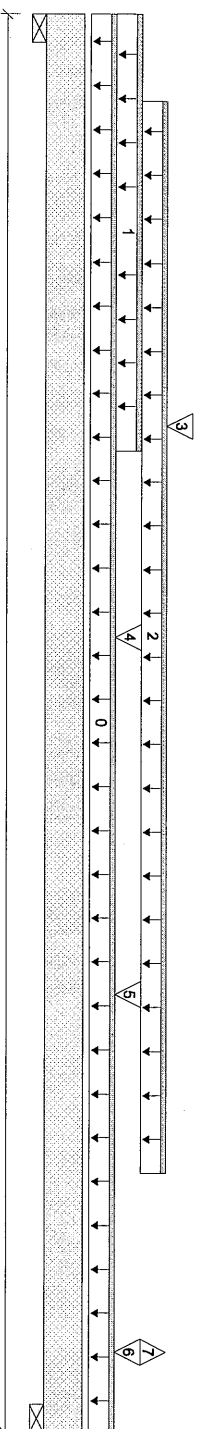
Dry | 1 span | No cant.

June 25, 2020 16:25:36

BC CALC® Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: 2nd Floor - Supply/BOMFflush Beams\B3(i57177)
Specifier:
Designer:
Company:



Reaction Summary (Down / Uplift) (lbs)

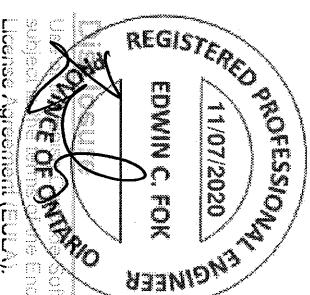
Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	1245 / 0	700 / 0		
B2, 5-1/2"	966 / 20	494 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	05-03-08	Top	1.00	0.65	1.00	1.15	00-00-00
1	16(i48356)	Unf. Lin. (lb/ft)	L	00-00-00	01-07-08	Top		61			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-03-14	04-03-14	Top		240			n/a
3	B1(i56658)	Conc. Pt. (lbs)	L	01-06-06	01-06-06	Top		771			352
4	J6(i57284)	Conc. Pt. (lbs)	L	02-03-14	02-03-14	Top		178			89
5	J6(i57510)	Conc. Pt. (lbs)	L	03-07-14	03-07-14	Top		218			109
6	J6(i57288)	Conc. Pt. (lbs)	L	04-11-14	04-11-14	Top		78			n/a
7	J6(i57288)	Conc. Pt. (lbs)	L	04-11-14	04-11-14	Top		-20			n/a

Controls Summary

Pos.	Moment	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
End Shear	2434 lbs	17696 ft-lbs	19.0%		1	02-03-14
Total Load Deflection	L/999 (0.018")	7232 lbs	33.7%		1	01-03-06
Live Load Deflection	L/999 (0.012")	n/a	n/a		6	02-05-14
Max Defl.	0.018"	n/a	n/a		8	02-05-14
Span / Depth	4.7				6	02-05-14



Software are is subject to the End User License Agreement (EULA).

Notes

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.
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 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

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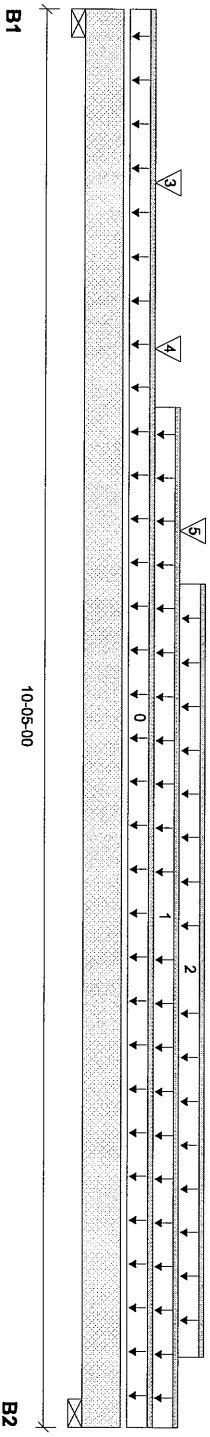
BC CALC® Member Report
 Build 7493
 Job name:
 Address:
 City, Province, Postal Code:
 Customer:
 Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
 Description: 2nd Floor - Supply/BOM/Flush Beams\B4(i57036)
 Specifier:
 Designer:
 Company:

Dry | 1 span | No cant.

June 25, 2020 16:25:36



Reaction Summary (Down / Uplift) (lbs)

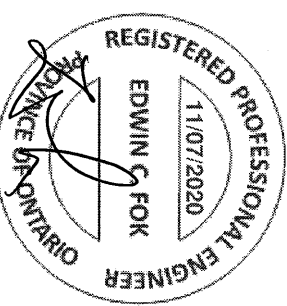
Bearing	Live	Dead	Snow	Wind
B1, 6"	1972 / 0	1209 / 0		
B2, 6"	2064 / 0	1393 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	10-05-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	43(48422)	Unf. Lin. (lb/ft)	L	02-11-00	10-05-00	Top		61			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	04-02-10	09-10-12	Top		422			n/a
3	-	Conc. Pt. (lbs)	L	01-03-04	01-03-04	Top		547			n/a
4	-	Conc. Pt. (lbs)	L	02-05-13	02-05-13	Top		547			n/a
5	-	Conc. Pt. (lbs)	L	03-09-15	03-09-15	Top		544			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	11398 ft-lbs	35392 ft-lbs	32.2%	1	05-02-12
End Shear	4188 lbs	14464 lbs	29.0%	1	01-05-14
Total Load Deflection	L/845 (0.136")	n/a	28.4%	4	05-02-12
Live Load Deflection	L/999 (0.082")	n/a	n/a	5	05-02-12
Max Defl.	0.136"	n/a	n/a	4	05-02-12
Span / Depth	9.6				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 6" x 3-1/2"	4469 lbs	34.6%	17.4%	Spruce-Pine-Fir
B2	Wall/Plate 6" x 3-1/2"	4838 lbs	37.5%	18.9%	Spruce-Pine-Fir

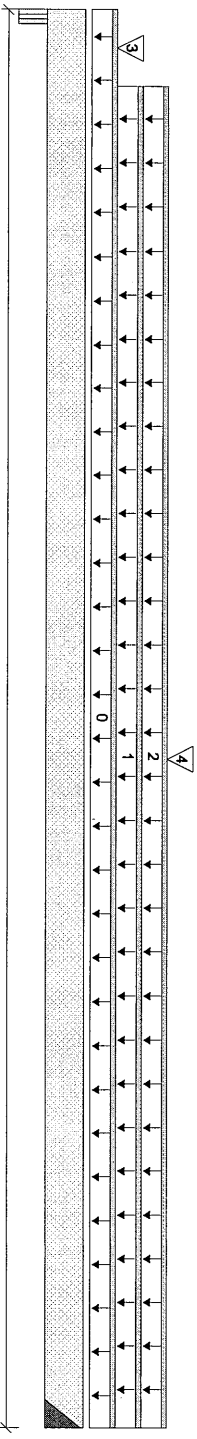
Notes

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.
 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Nail one ply to another with
 3 1/2" spiral nails @ 12"
 o.c, staggered in 2 rows

BC CALC® Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: Ground Floor - Supply/BOM/Flush Beams/BS(558674)
Specifier:
Designer:
Company:



B1 08-05-12 B2

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5-1/2"	1284 / 0	741 / 0		
B2, 2"	1046 / 0	589 / 0		

Total Horizontal Product Length = 08-05-12

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-05-12	Top	6	90			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-05-08	08-05-12	Top	240	16			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-05-08	08-05-12	Top	8	174			n/a
3	26(48395)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top	280	321			n/a
4		Conc. Pt. (lbs)	L	04-05-12	04-05-12	Top					n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	4868 ft-lbs	17696 ft-lbs	27.5%	1	04-04-12
End Shear	1713 lbs	7232 lbs	23.7%	1	07-03-14
Total Load Deflection	L/999 (0.079")	n/a	n/a	4	04-04-12
Live Load Deflection	L/999 (0.048")	n/a	n/a	5	04-04-12
Max Defl.	0.079"	n/a	n/a	4	04-04-12
Span / Depth	8.1				

Bearing Supports

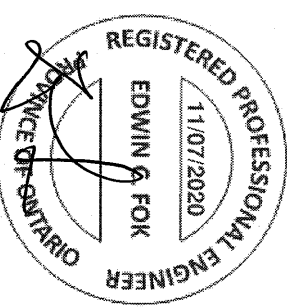
B1	Beam	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam	5-1/2" x 1-3/4"	2853 lbs	48.2%	24.3%	Unspecified
B2	Hanger	2" x 1-3/4"	2306 lbs	n/a	54.0%	HUS1.8/1/10

Cautions

Header for the hanger HUS1.8/1/10 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger model HUS1.8/1/10 and seat length were input by the user.

Notes

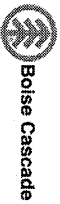
Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Unassigned
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

Ground Floor - Supply/BOM/Flush Beams\B6(558888) (Flush Beam)

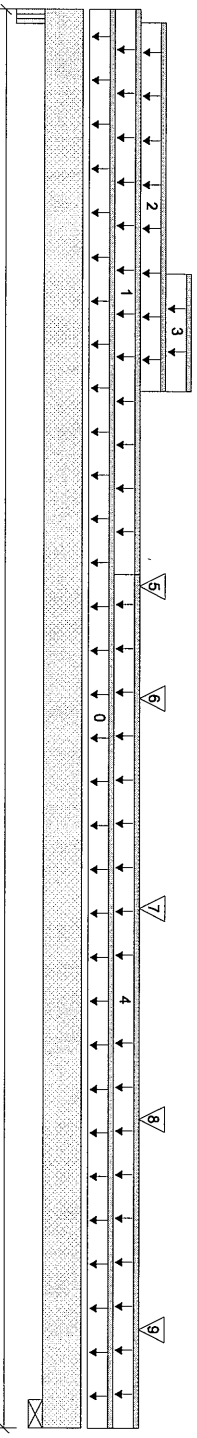
Dry | 1 span | No cant

June 25, 2020 16:28:10

BC CALC® Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: Ground Floor - Supply/BOM/Flush Beams\B6(558888)
Specifier:
Designer:
Company:

CCMC 12472-R



Reaction Summary (Down / Uplift) (lbs)

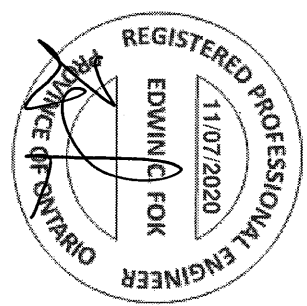
Bearing	Live	Dead	Snow	Wind
B1, 2-3/4"	1206 / 0	1027 / 0		
B2, 2-3/8"	1137 / 0	727 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-11-14	Top	12	0.65	1.00	1.15	00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-07-00	Top	20	10			n/a
2	45(49417)	Unf. Lin. (lb/ft)	L	00-01-00	02-05-00	Top	68				n/a
3	45(49417)	Unf. Lin. (lb/ft)	L	01-08-00	02-05-00	Top	430	505			n/a
4	FC2 Floor Material	Unf. Lin. (lb/ft)	L	03-07-00	08-11-14	Top	17	9			n/a
5	B5(558674)	Conc. Pt. (lbs)	L	03-07-14	03-07-14	Top	1017	576			n/a
6	J6(558925)	Conc. Pt. (lbs)	L	04-04-06	04-04-06	Top	175	104			n/a
7	J6(558785)	Conc. Pt. (lbs)	L	05-08-06	05-08-06	Top	224	112			n/a
8	J6(559237)	Conc. Pt. (lbs)	L	07-00-06	07-00-06	Top	224	112			n/a
9	J6(558523)	Conc. Pt. (lbs)	L	08-04-06	08-04-06	Top	176	88			n/a

Controls Summary

Pos. Moment	Factored Demand	Resistance	Demand/Resistance	Case	Location
End Shear	8192 ft-lbs	35392 ft-lbs	23.1%	1	03-07-14
Total Load Deflection	2921 lbs	14464 lbs	20.2%	1	01-02-10
Live Load Deflection	L/999 (0.074")	n/a	n/a	4	04-04-06
Max Defl.	L/999 (0.044")	n/a	n/a	5	04-04-06
Span / Depth	0.074"	n/a	n/a	4	04-04-06



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	2-3/4" x 3-1/2"	3093 lbs	52.2%	26.3%	Unspecified
B2	Wall/Plate 2-3/8" x 3-1/2"	2614 lbs	51.1%	25.8%	Spruce-Pine-Fir

Notes

Design meets Code minimum (U240) Total load deflection criteria.
Design meets Code minimum (U360) 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 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

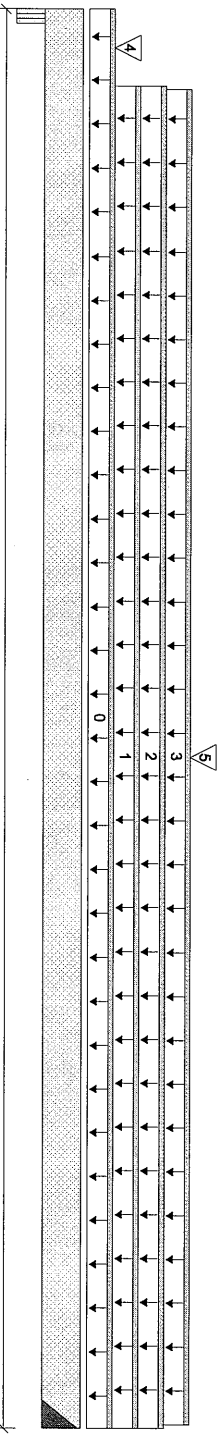
Nail one ply to another with
3 1/2" spiral nails @ 10"
o.c, staggered in 2 rows

35020640

BC CALCO Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: Ground Floor - Supply/BOM/Flush Beams/B7(158659)
Specifier:
Designer:
Company:



B1

08-05-12

B2

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5-1/2"	542 / 0	624 / 0		
B2, 2"	478 / 0	515 / 0		

Total Horizontal Product Length = 08-05-12

Load Summary

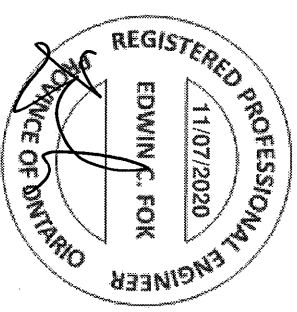
Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-05-12	Top	1.00	0.65	1.00	1.15	00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-05-08	08-05-12	Top	70	27			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-05-08	08-05-12	Top	12	6			n/a
3	42(48420)	Unf. Lin. (lb/ft)	L	00-05-12	08-05-08	Top		68			n/a
4	26(48395)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top	79	122			n/a
5	User Load	Conc. Pt. (lbs)	L	04-05-10	04-05-10	Top	280	105			n/a

Controls Summary

Pos.	Moment	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
	3201 ft-lbs	35392 ft-lbs	9.0%		1	04-05-10
	1129 lbs	14464 lbs	7.8%		1	01-05-06
	Total Load Deflection	L/999 (0.025")	n/a	n/a	4	04-04-07
	Live Load Deflection	L/999 (0.013")	n/a	n/a	5	04-04-07
	Max Defl.	0.025"	n/a	n/a	4	04-04-07
	Span / Depth	8.1				

Bearing Supports

B1	Beam	Dim. (LxW)	Demand	Resistance	Demand/Resistance	Material
		5-1/2" x 3-1/2"	1593 lbs	13.5%	6.8%	Unspecified
B2	Hanger	2" x 3-1/2"	1361 lbs	n/a	15.9%	HGUS410



Cautions

Header for the hanger HGUS410 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger model HGUS410 and seat length were input by the user.
3 1/2" spiral nails @ 10" o.c., staggered in 2 rows



Boise Cascade



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

Ground Floor - Supply/BOM/Flush Beams\B8(58529) (Flush Beam)

Dry | 1 span | No cant.

June 25, 2020 16:28:10

BC CALC® Member Report
Build 7493

Job name:

Address:

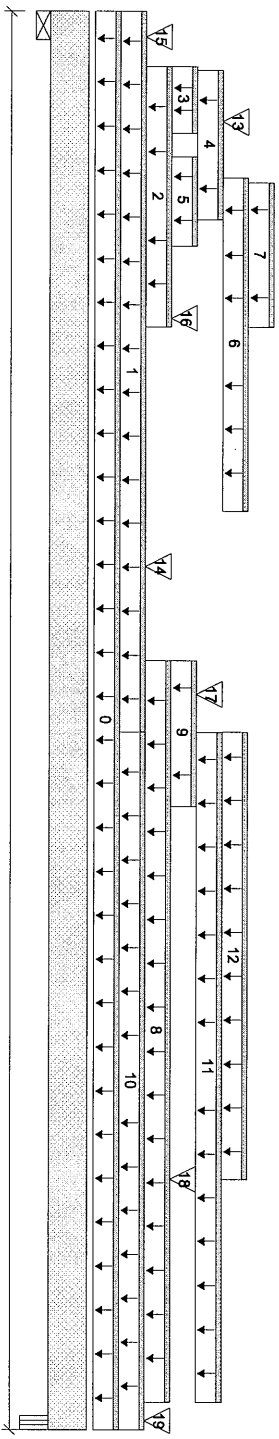
City, Province, Postal Code:

Customer:

Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: Ground Floor - Supply/BOM/Flush Beams\B8(58529)
Specifier:
Designer:
Company:



B1

12-09-00

B2

Total Horizontal Product Length = 12-09-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	1983 / 0	1978 / 0		
B2, 2-3/4"	1463 / 0	1638 / 0		

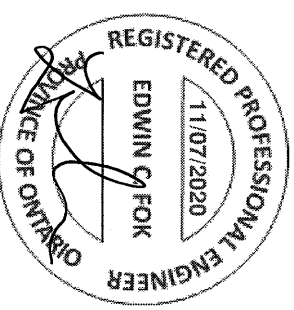
Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-09-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	06-05-12	Top		17			9
2	30(48404)	Unf. Lin. (lb/ft)	L	00-06-00	02-10-00	Top		68			68
3	30(48404)	Unf. Lin. (lb/ft)	L	00-06-00	01-01-02	Top		61			61
4	30(48404)	Unf. Lin. (lb/ft)	L	00-06-06	01-10-06	Top		124			71
5	30(48404)	Unf. Lin. (lb/ft)	L	01-03-10	02-01-02	Top		61			61
6	Smoothed Load	Unf. Lin. (lb/ft)	L	01-05-14	04-05-14	Top		168			84
7	30(48404)	Unf. Lin. (lb/ft)	L	01-06-06	02-10-00	Top		127			73
8	32(48403)	Unf. Lin. (lb/ft)	L	05-10-00	12-06-00	Top		68			68
9	32(48403)	Unf. Lin. (lb/ft)	L	05-10-00	07-01-12	Top		204			204
10	FC2 Floor Material	Unf. Lin. (lb/ft)	L	06-05-12	12-09-00	Top		20			10
11	32(48403)	Unf. Lin. (lb/ft)	L	06-05-12	12-06-00	Top		7			19
12	User Load	Unf. Lin. (lb/ft)	L	06-05-12	10-06-00	Top		70			27
13	J6(58527)	Conc. Pt. (lbs)	L	00-11-14	00-11-14	Top		155			77
14	J6(58782)	Conc. Pt. (lbs)	L	04-11-14	04-11-14	Top		159			80
15	E14(48375)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top		54			107
16	30(48404)	Conc. Pt. (lbs)	L	02-09-00	02-09-00	Top		255			255
17	-	Conc. Pt. (lbs)	L	06-01-10	06-01-10	Top		942			885
18	User Load	Conc. Pt. (lbs)	L	10-05-15	10-05-15	Top		350			131
19	35(48399)	Conc. Pt. (lbs)	L	12-08-00	12-08-00	Top		93			147

Controls Summary

Pos. Moment	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
End Shear	16879 ft-lbs	35392 ft-lbs	47.7%	1	06-04-00
Total Load Deflection	5058 lbs	14464 lbs	35.0%	1	01-03-06
Live Load Deflection	L/457 (0.324")	n/a	52.5%	4	06-04-00
Max Def.	L/935 (0.159")	n/a	38.5%	5	06-04-00
Span / Depth	0.324"	n/a	n/a	4	06-04-00

Nail one ply to another with
3 1/2" spiral nails @ 12"
o.c. staggered in 2 rows



SE020642



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

Ground Floor - Supply/BOM/Flush Beams/B9(558503) (Flush Beam)

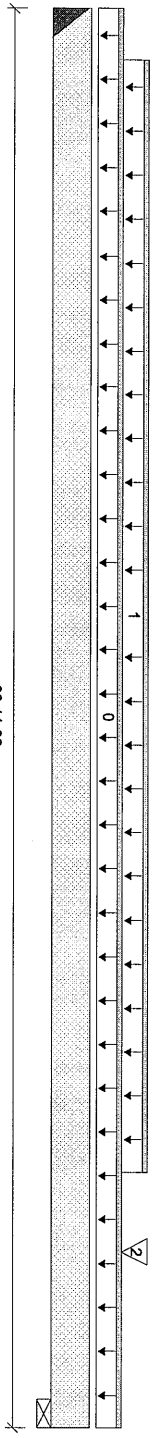
Dry | 1 span | No cant.

June 25, 2020 16:28:10

BC CALC® Member Report
Build 7493
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: Ground Floor - Supply/BOM/Flush Beams/B9(558503)
Specifier:
Designer:
Company:

CCMC 12472-R



08-11-02

Total Horizontal Product Length = 08-11-02

Reaction Summary (Down / Uplift) (lbs)		Snow		Wind	
Bearing	Live	Dead			
B1, 2"	518 / 0	286 / 0			
B2, 2-3/8"	499 / 0	276 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-11-02	Top	1.00	0.65	1.00	1.15	00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-03-14	07-03-14	Top		126			n/a
2	J8(558549)	Conc. Pt. (lbs)	L	07-09-14	07-09-14	Top		137			n/a

Controls Summary

Pos.	Moment	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
End Shear	2603 ft-lbs	17696 ft-lbs	14.7%		1	04-09-14
Total Load Deflection	1060 lbs	7232 lbs	14.7%		1	07-08-14
Live Load Deflection	L/999 (0.051")	n/a	n/a		4	04-05-06
Max Defl.	L/999 (0.033")	n/a	n/a		5	04-05-06
Span / Depth	0.051"	n/a	n/a		4	04-05-06
	8.8					

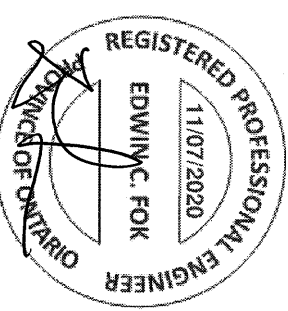
Bearing Supports		Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger	2" x 1-3/4"	1134 lbs	n/a	26.6%	HUS1.81/10
B2	Wall/Plate	2-3/8" x 1-3/4"	1094 lbs	42.8%	21.6%	Spruce-Pine-Fir

Cautions

Header for the hanger HUS1.81/10 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger model HUS1.81/10 and seat length were input by the user. /

Notes

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 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA).
Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is 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 (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AIS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

56020643

BC CALC® Member Report
Build 7493

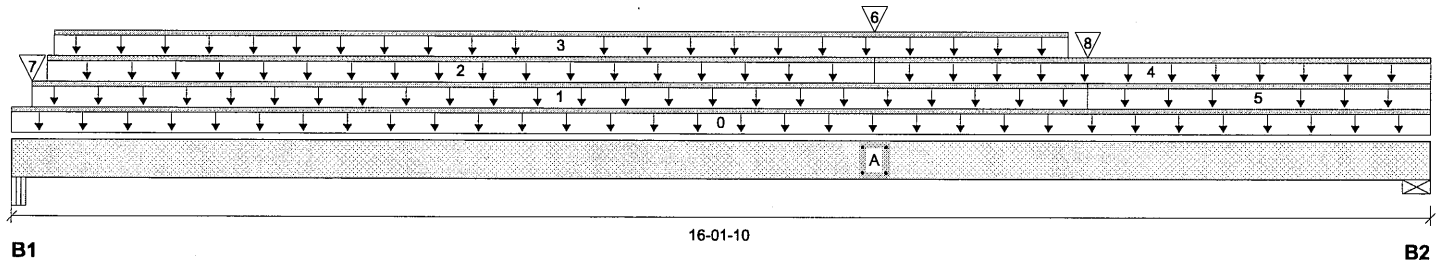
Dry | 1 span | No cant.

June 25, 2020 16:28:10

Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

CCMC 12472-R

File name: 5009 EL. A OPT. 5 BR & SUNK MUDRM.mmdl
Description: Ground Floor - Supply/BOM\Flush Beams\B10(i59219)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 16-01-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5-1/2"	2040 / 0	1647 / 0		
B2, 2-3/8"	1469 / 0	1158 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	16-01-10	Top		12			00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-02-12	12-02-12	Top	24	12			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-04-12	09-09-10	Top	183	92			n/a
3	29(i48398)	Unf. Lin. (lb/ft)	L	00-05-12	12-00-00	Top		68			n/a
4	FC2 Floor Material	Unf. Lin. (lb/ft)	L	09-09-10	16-01-10	Top	19	10			n/a
5	FC2 Floor Material	Unf. Lin. (lb/ft)	L	12-02-12	16-01-10	Top	21	11			n/a
6	B9(i58503)	Conc. Pt. (lbs)	L	09-09-10	09-09-10	Top	513	283			n/a
7	22(i48391)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top	306	173			n/a
8	44(i48428)	Conc. Pt. (lbs)	L	12-02-12	12-02-12	Top	478	263			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	18222 ft-lbs	35392 ft-lbs	51.5%	1	08-05-15
End Shear	3951 lbs	14464 lbs	27.3%	1	01-05-06
Total Load Deflection	L/323 (0.579")	n/a	74.2%	4	08-02-13
Live Load Deflection	L/588 (0.319")	n/a	61.2%	5	08-02-13
Max Defl.	0.579"	n/a	n/a	4	08-02-13
Span / Depth	15.8				

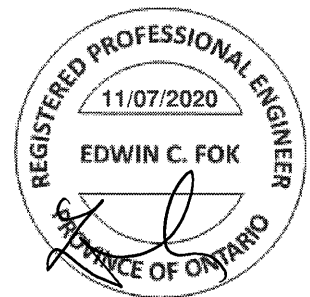
Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 5-1/2" x 3-1/2"	5119 lbs	43.2%	21.8%	Unspecified
B2	Wall/Plate 2-3/8" x 3-1/2"	3651 lbs	71.4%	36.0%	Spruce-Pine-Fir

Notes

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.
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 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

Nail one ply to another with
3 1/2" spiral nails @ 12"
o.c. staggered in 2 rows



Maximum Floor Spans – M4.1, L/360

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/360 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued oriented strand board (OSB) sheathing



Maximum Floor Spans

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

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

Notes:

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

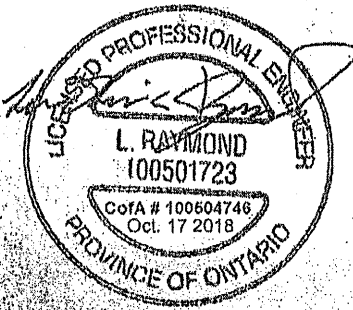
The construction details for residential designs are prone to changes.

Details released after April 2014 supersedes N-C301

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

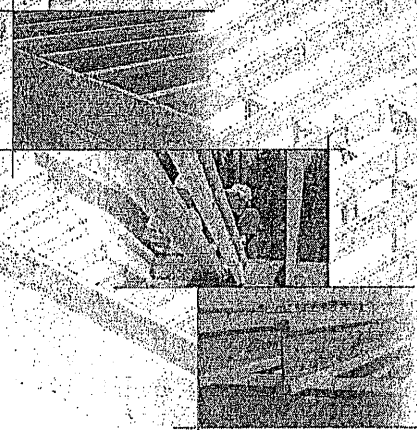
This document does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of its component based on the design criteria and loadings shown on the calculation sheets.

Document prepared for the use of Stephanie Gon from Alpa, Ontario. (Nordic Request 1810-095)



NORDIC ENGINEERED WOOD

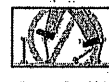
INSTALLATION GUIDE FOR RESIDENTIAL FLOORS



Distributed by:



SAFETY AND CONSTRUCTION PRECAUTIONS



WARNING

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

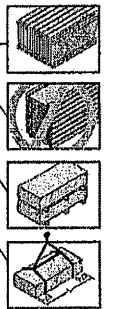
Avoid Accidents by Following these Important Guidelines:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bracing at joist ends. When I-joists are applied continuously over interior supports and a load-bearing wall is placed 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, top ends of adjoining bracing over at least two I-joists.
 - Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the bay.
3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bracing.
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

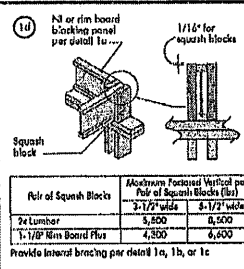
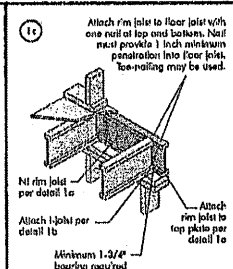
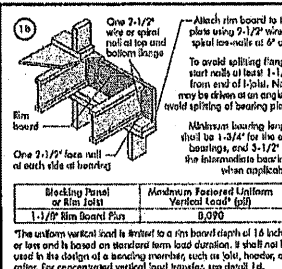
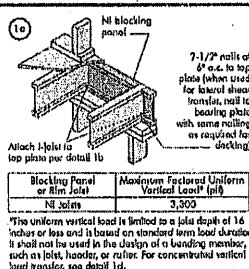
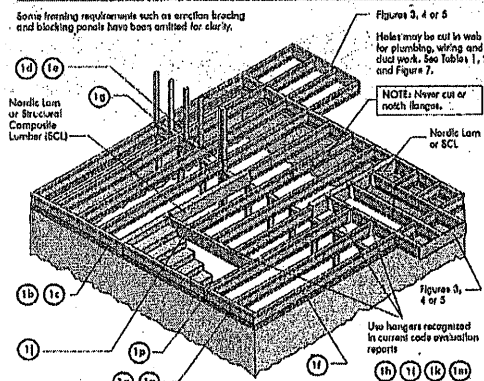
1. Bundle wrap can be slippery when wet. Avoid walking on wrapped bundles.
2. Store, stack, and handle I-joists vertically and level only.
3. Always stack and handle I-joists in the upright position only.
4. Do not store I-joists in direct contact with the ground and/or finish.
5. Protect I-joists from 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 CHAIN TRY TO REPAIR A DAMAGED I-JOIST.



INSTALLING NORDIC I-JOISTS

1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, 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-span joists must be level.
5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
6. When using hangers, seat I-joist flanges in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joist end and a brace.
8. Concentrated loads greater than those that are normally expected in residential construction should only be applied to the top surface of the top flange. Normal concentrated loads include roof lighting fixtures, ducts, 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 between bearing walls, use full depth blocking panels, rim board, or squash blocks (see page members) to transfer gravity loads through the floor system to the wall or foundation below.
12. Due to shrinkage, common framing lumber cut 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 on 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 near to the cantilever extension. In the completed structure, the approved wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or struts must be used.
14. If square-edge panels are used, edges must be supported between I-joists with 2x4 blocking. Glue panels to blocking to minimize squeaks. Blocking is not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment layer is installed.
15. Nail spacing: Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

FIGURE 1
TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS



The construction details for residential designs are prone to changes.

Details released after April 2014 supersedes N-C301

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document 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 its component based on the design criteria and loadings shown on the calculation sheets.

Document prepared for the use of Stephanie Gon from Alpa, Ontario. (Nordic Request 1810-095)



N-C301/April 2014

MAXIMUM FLOOR SPANS

- Maximum clear spans applicable to single-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 spans.
- Spans are based on a composite floor with glass-faced 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 CCB-71.24 Standard. No concrete topping or bridging element was assumed. Increased spans may be achieved with the use of gypsum and/or concrete topping at mid-spans.
- Minimum bearing length shall be 1-3/4 inches for the end bearings, and 2-1/2 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 procedures.
- Tables are based on Limit States Design per CAN/CSA C308-09 Standard, and NBC 7010.
- SI units conversions: 1 inch = 25.4 mm, 1 foot = 0.305 m

MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS

SIMPLE AND MULTIPLE SPANS											
Span	Flange Width	Span (ft)									
		19.2	24.0	28.8	33.6	38.4	43.2	48.0	52.8	57.6	62.4
1-1/2"	N-20	19.2	14.5	13.9	13.5	13.3	13.2	13.1	13.0	12.9	12.8
	N-24	19.2	15.2	14.6	14.1	13.7	13.4	13.2	13.0	12.8	12.6
	N-28	19.2	15.8	15.1	14.5	14.0	13.6	13.3	13.0	12.7	12.4
	N-33	19.2	16.4	15.6	14.9	14.3	13.8	13.4	13.0	12.6	12.2
	N-38	19.2	17.0	16.2	15.5	14.8	14.2	13.7	13.2	12.8	12.3
1-1/4"	N-20	21.1	15.2	14.5	14.0	13.6	13.3	13.0	12.7	12.4	12.1
	N-24	21.1	15.9	15.2	14.5	14.0	13.6	13.2	12.8	12.4	12.0
	N-28	21.1	16.6	15.8	15.1	14.4	13.8	13.4	13.0	12.6	12.2
	N-33	21.1	17.3	16.5	15.7	15.0	14.4	13.9	13.4	13.0	12.5
	N-38	21.1	18.0	17.2	16.4	15.6	15.0	14.5	14.0	13.5	13.0
1-1/8"	N-20	19.6	14.0	13.4	13.0	12.7	12.4	12.1	11.8	11.5	11.2
	N-24	19.6	14.7	14.0	13.4	12.9	12.5	12.2	11.8	11.4	11.0
	N-28	19.6	15.4	14.6	13.9	13.3	12.9	12.5	12.1	11.7	11.3
	N-33	19.6	16.1	15.3	14.5	13.8	13.3	12.8	12.3	11.9	11.4
	N-38	19.6	16.8	15.9	15.1	14.4	13.8	13.3	12.8	12.3	11.8
1"	N-20	20.1	14.7	14.0	13.5	13.1	12.7	12.4	12.0	11.7	11.3
	N-24	20.1	15.4	14.6	14.0	13.5	13.1	12.7	12.3	11.9	11.5
	N-28	20.1	16.1	15.3	14.5	13.8	13.3	12.8	12.3	11.8	11.4
	N-33	20.1	16.8	15.9	15.1	14.4	13.8	13.3	12.8	12.3	11.8
	N-38	20.1	17.5	16.6	15.7	15.0	14.4	13.8	13.3	12.8	12.3
3/4"	N-20	20.6	15.2	14.5	14.0	13.6	13.2	12.8	12.4	12.0	11.6
	N-24	20.6	15.9	15.1	14.4	13.8	13.4	13.0	12.6	12.2	11.8
	N-28	20.6	16.6	15.7	15.0	14.3	13.7	13.2	12.7	12.2	11.7
	N-33	20.6	17.3	16.4	15.6	14.8	14.2	13.7	13.2	12.7	12.2
	N-38	20.6	18.0	17.1	16.2	15.4	14.7	14.1	13.6	13.1	12.6
3/8"	N-20	20.1	14.7	14.0	13.5	13.1	12.7	12.4	12.0	11.7	11.3
	N-24	20.6	15.4	14.6	14.0	13.5	13.1	12.7	12.3	11.9	11.5
	N-28	21.1	16.1	15.2	14.5	13.9	13.4	12.9	12.4	11.9	11.4
	N-33	21.6	16.8	15.8	15.0	14.3	13.7	13.2	12.7	12.2	11.7
	N-38	22.1	17.5	16.5	15.6	14.8	14.1	13.5	13.0	12.5	12.0
1/2"	N-20	20.6	15.2	14.5	14.0	13.6	13.2	12.8	12.4	12.0	11.6
	N-24	21.1	15.9	15.1	14.4	13.8	13.4	13.0	12.6	12.2	11.8
	N-28	21.6	16.6	15.7	15.0	14.3	13.7	13.2	12.7	12.2	11.7
	N-33	22.1	17.3	16.4	15.6	14.8	14.1	13.5	13.0	12.5	12.0
	N-38	22.6	18.0	17.0	16.1	15.3	14.6	14.0	13.5	13.0	12.5
1/4"	N-20	20.1	14.7	14.0	13.5	13.1	12.7	12.4	12.0	11.7	11.3
	N-24	20.6	15.4	14.6	14.0	13.5	13.1	12.7	12.3	11.9	11.5
	N-28	21.1	16.1	15.2	14.5	13.9	13.4	12.9	12.4	11.9	11.4
	N-33	21.6	16.8	15.8	15.0	14.3	13.7	13.2	12.7	12.2	11.7
	N-38	22.1	17.5	16.5	15.6	14.8	14.1	13.5	13.0	12.5	12.0
1/8"	N-20	20.6	15.2	14.5	14.0	13.6	13.2	12.8	12.4	12.0	11.6
	N-24	21.1	15.9	15.1	14.4	13.8	13.4	13.0	12.6	12.2	11.8
	N-28	21.6	16.6	15.7	15.0	14.3	13.7	13.2	12.7	12.2	11.7
	N-33	22.1	17.3	16.4	15.6	14.8	14.1	13.5	13.0	12.5	12.0
	N-38	22.6	18.0	17.0	16.1	15.3	14.6	14.0	13.5	13.0	12.5

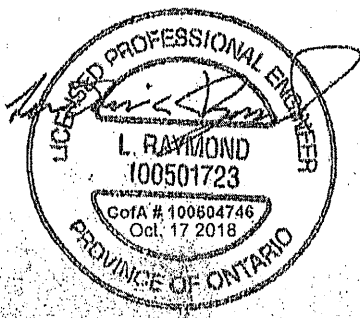
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Document prepared for the use of Stephanie Gon from Alpa, Ontario. (Nordic Request 1810-095)



CANTILEVER DETAILS FOR BALCONIES (NO WALL LOAD)

30a 1-JOIST CANTILEVER DETAIL FOR BALCONIES (No Wall Load)

Can'tilever extension supporting uniform floor loads only.

Rim board or wood structural panel closure attach per detail 1b.

1-joist, or rim board.

3-1/2" min. bearing required.

CAUTION: Cantilevers formed this way must be carefully detailed to prevent moisture intrusion into the structure and potential decay of untreated joist extensions.

Note: This detail is applicable to cantilevers supporting a maximum specified uniform live load of 60 psf.

30b LUMBER CANTILEVER DETAIL FOR BALCONIES (No Wall Load)

Full depth blocker block with 1/8" gap between block and top flange of joist. See detail 1b. Nail with 2 rows of 3" nails at 6" o.c. and clinch.

2x6 min. Nail to blocker block and joist with 2 rows of 3" nails at 6" o.c. and clinch. (Cantilever nails may be used to attach blocker block if length of nail is sufficient to allow clinching.)

Can'tilever extension supporting uniform floor loads only.

Lumber or wood structural panel closure.

3-1/2" min. bearing required.

1-joist, or rim board.

Note: This detail is applicable to cantilevers supporting a maximum specified uniform live load of 60 psf.

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

30a Method 1 — SHEATHING REINFORCEMENT ONE SIDE

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

2-1/2" min. bearing required.

3-1/2" min. bearing required.

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

Attach joist to plate per detail 1b.

Method 2 — SHEATHING REINFORCEMENT TWO SIDES

Use same installation as Method 1 but reinforce both sides of 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 joist to plate on all supports per detail 1b. Verify reinforced joist capacity.

30b Alternate Method 2 — DOUBLE I-JOIST

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

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

Face nail two rows of 3" nails at 12" o.c. each side through one joist web and the filler block to other joist web. Offset nails from opposite face by 6". Clinch if possible.

Four nails per foot required, except two nails per foot required if clinched.

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

FIGURE 4 (continued)



CANTILEVER REINFORCEMENT METHODS ALLOWED

Span (ft)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
7-1/2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
11-7/8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
16	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
18	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
20	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
24	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
26	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
28	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
30	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

1. N = No reinforcement required.
2. N = Reinforced with 3/4" wood structural panel on one side only.
3. N = Reinforced with 3/4" wood structural panel on both sides, or double joist.
4. N = Two deeper joists or closer spacing.
5. Maximum design load shall be 15 psf dead load, 45 psf live load, and 60 psf total load. Wall load is based on 2'-0" maximum width window or door opening.
6. For larger openings, or multiple 2'-0" with openings spaced less than 6'-0" o.c., multiple joist beneath the opening's cripple studs may be required.
7. Joist applies to joist 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/180. Use 12" o.c. requirements for lesser spacing.
8. 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 if a truss is used.
9. Cantilevered joist supporting glider trusses or roof beams may require additional reinforcing.

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

30a SHEATHING REINFORCEMENT

Provide full depth blocking between joist over support (not shown).

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 joist to plate on all supports per detail 1b. Verify reinforced joist capacity.

12" minimum length of sheathing reinforcement.

Nail reinforcement to top and bottom joist flanges with 2-1/2" nails at 6" o.c. (offset opposite face nailing by 3" when using reinforcement on both sides of joist).

3-1/2" min. bearing required.

30b SET-BACK DETAIL

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

Bearing walls.

5" max.

Attach joist to plate per detail 1b.

Notes:

- Provide full depth blocking between joist over support (not shown for clarity).
- Attach joist to plate on all supports per detail 1b.
- 3-1/2" minimum joist bearing required.

30c SET-BACK CONNECTION

Vertical solid sawn blocks (2x6 S-P-F No. 2 or better) nailed through joist web and web of glider using 2-1/2" nails.

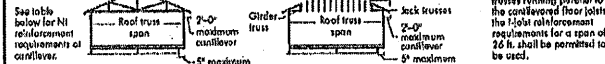
Alternate for opposite side.

Notes:

- Verify glider joist capacity if the block span exceeds the joist spacing.
- Attach double joist per detail 1p, if required.

Hanger may be used in lieu of solid sawn blocks.

FIGURE 5 (continued)



BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

Span (ft)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
9-1/2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
11-7/8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
16	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
18	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
20	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
24	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
26	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
28	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
30	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

1. N = No reinforcement required.
2. N = Reinforced with 3/4" wood structural panel on one side only.
3. N = Reinforced with 3/4" wood structural panel on both sides, or double joist.
4. N = Two deeper joists or closer spacing.
5. Maximum design load shall be 15 psf dead load, 45 psf live load, and 60 psf total load. Wall load is based on 2'-0" maximum width window or door opening.
6. For larger openings, or multiple 2'-0" with openings spaced less than 6'-0" o.c., multiple joist beneath the opening's cripple studs may be required.
7. Joist applies to joist 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/180. Use 12" o.c. requirements for lesser spacing.
8. 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 if a truss is used.
9. Cantilevered joist supporting glider trusses or roof beams may require additional reinforcing.

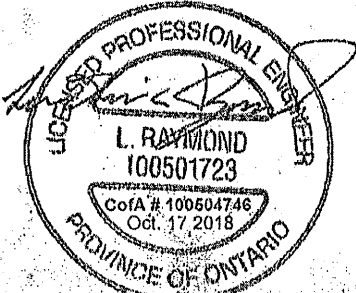
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Document prepared for the use of Stephanie Gon from Alpa, Ontario. (Nordic Request 1810-095)



N-C301/April 2014

WEB HOLES

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS

- The distance between the inside edge of the support and the centre of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
- I-Joist top and bottom flanges must NEVER be cut, notched, or otherwise modified.
- Whenever possible, hole-cut holes should be centred on the middle of the web.
- The maximum hole or duct chase opening shall be cut into the I-joist web such that the clear distance between the flanges of the I-joist is 1 1/4 inch. A minimum of 1/8 inch shall always be maintained between the top or bottom of the hole or opening and the adjacent I-joist flange.
- The sides of square holes or largest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
- 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 largest side of the largest 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.
- A knockout is not considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distance between I-joists and/or duct chase openings.
- Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a continuous section of a joist. Holes of greater size may be permitted subject to verification.
- 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.
- 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.
- Limit three maximum 2x6 holes per span, of which one may be a duct chase opening.
- A group of round holes of approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

TABLE 1
LOCATION OF CIRCULAR HOLES IN JOIST WEBS
Simple or Multiple Span for Dead Loads up to 16 psf and Live Loads up to 40 psf

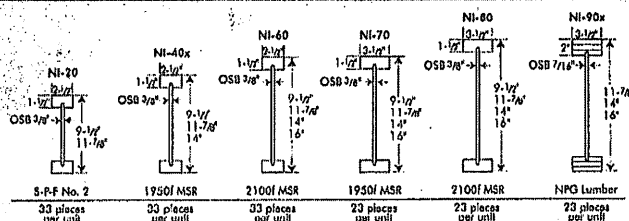
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CONSTRUCTION DETAILS FOR RESIDENTIAL FLOORS

N-C303 / September 2013



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



WEB HOLE SPECIFICATIONS

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The distance between the inside edge of the support and the 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 shall 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 shall not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knockout is not considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller are permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.

9. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
10. All holes and duct chase openings shall be cut in a workmanlike manner in accordance with the restrictions listed above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

TABLE 1
LOCATION OF CIRCULAR HOLES IN JOIST WEBS

Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

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

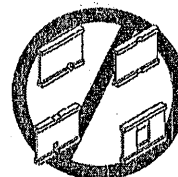
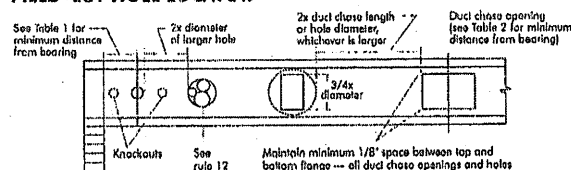
1. Above table may be used for I-Joist spacing of 24 inches on centre or less.
2. Hole location distance is measured from inside face of support to centre of hole.
3. Distances in this chart are based on uniformly loaded joists.
4. The above table is based on the I-Joist being used at their maximum spans.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

TABLE 2
DUCT CHASE OPENING SIZES AND LOCATIONS
Simple Span Only

Joist Depth	Joist Series	Minimum Distance from Inside Face of 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"	4-10"	5-4"	5-8"	6-1"	6-6"	7-1"	7-5"	7-9"	8-3"	8-7"
	NI-40x	5-2"	5-6"	6-0"	6-5"	6-10"	7-3"	7-8"	8-2"	8-6"	9-0"	9-4"	9-8"
	NI-60	5-4"	5-9"	6-2"	6-7"	7-1"	7-6"	8-0"	8-4"	8-8"	9-2"	9-6"	10-0"
	NI-70	5-11"	5-5"	6-0"	6-5"	6-10"	7-3"	7-8"	8-2"	8-6"	9-0"	9-4"	9-8"
11-7/8"	NI-20	5-9"	6-2"	6-6"	7-1"	7-5"	7-9"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"
	NI-40x	6-8"	7-2"	7-6"	8-1"	8-5"	9-1"	9-5"	9-9"	10-3"	10-7"	11-1"	11-5"
	NI-60	7-0"	7-4"	7-8"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"	10-7"	11-1"	11-5"
	NI-70	7-1"	7-4"	7-8"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"	10-7"	11-1"	11-5"
14"	NI-20	7-2"	7-7"	8-0"	8-5"	8-10"	9-3"	9-8"	10-2"	10-6"	11-0"	11-4"	11-8"
	NI-40x	8-1"	8-7"	9-0"	9-6"	10-1"	10-7"	11-2"	11-7"	12-2"	12-7"	13-2"	13-7"
	NI-60	9-0"	9-5"	9-9"	10-4"	10-9"	11-4"	11-9"	12-4"	12-9"	13-4"	13-9"	14-4"
	NI-70	9-0"	9-5"	9-9"	10-4"	10-9"	11-4"	11-9"	12-4"	12-9"	13-4"	13-9"	14-4"
16"	NI-20	10-3"	10-8"	11-2"	11-6"	12-1"	12-6"	13-1"	13-6"	14-1"	14-6"	15-1"	15-6"
	NI-40x	10-1"	10-5"	11-0"	11-4"	11-9"	12-4"	12-9"	13-4"	13-9"	14-4"	14-9"	15-4"
	NI-60	10-4"	10-9"	11-3"	11-8"	12-3"	12-8"	13-3"	13-8"	14-3"	14-8"	15-3"	15-8"
	NI-70	11-1"	11-5"	12-0"	12-4"	12-9"	13-4"	13-9"	14-4"	14-9"	15-4"	15-9"	16-4"

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 support to centre of opening.
3. The above table is based on simple-span joists only. For other applications, contact your local distributor.
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480.
5. The above table is based on the I-Joist being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

FIGURE 7
FIELD-CUT HOLE LOCATOR



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

Never drill, cut or notch the flanges, 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 cut between the holes is another good method to minimize damage to the joist.

SAFETY AND CONSTRUCTION PRECAUTIONS



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



Never stick building materials over unbraced I-joists. Once sheathed, do not over-stress I-joists with concentrated loads from building materials.

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

AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bracing at joist ends. When I-joists are applied continuously 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 (driven 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-bracing.
4. Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
5. Never install a damaged I-joist.

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



PRODUCT WARRANTY

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

Furthermore, Charters Chilongem 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.

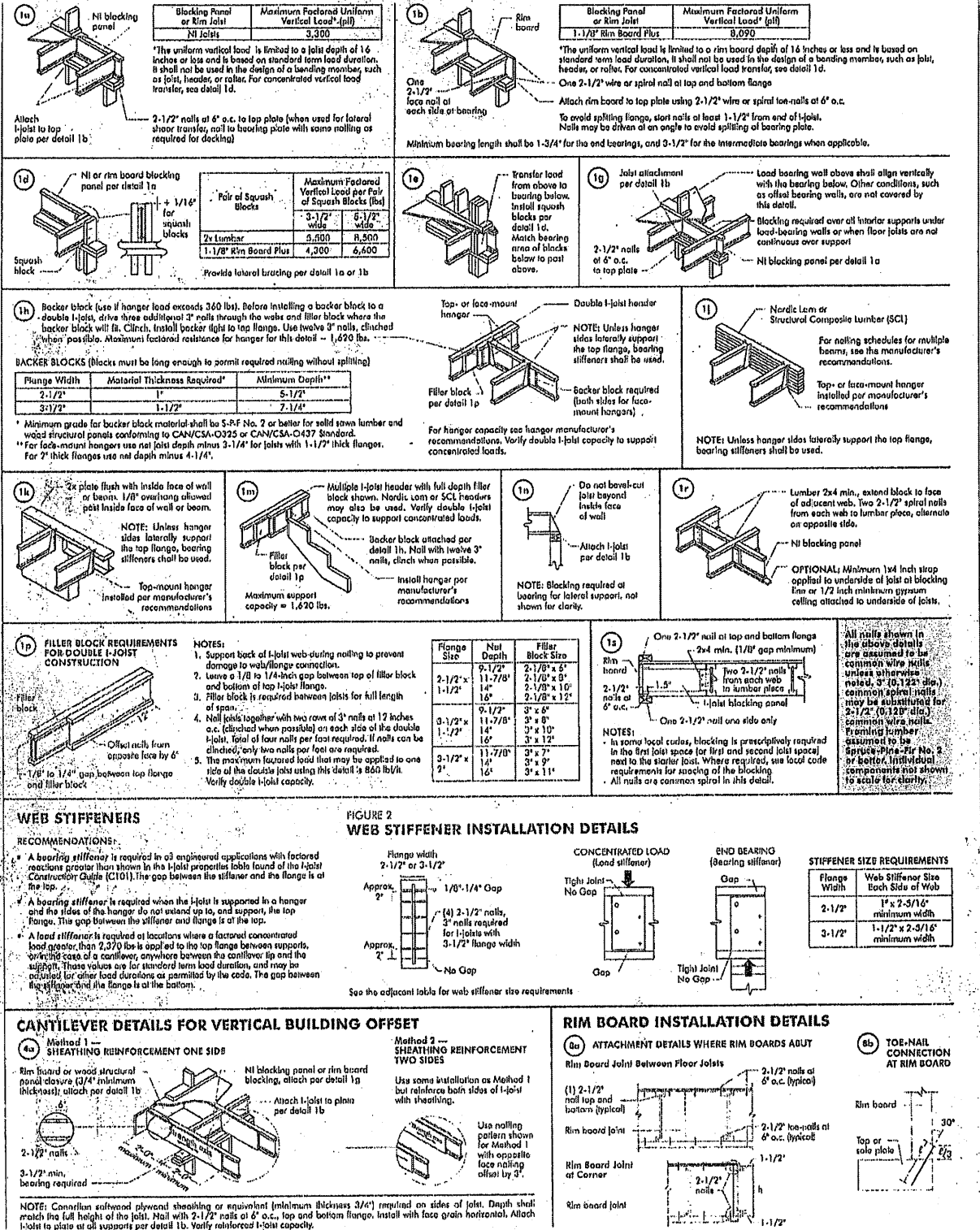
The construction details for residential designs are prone to changes.

Details released after September 2013 supersede N-303

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document 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 its component based on the design criteria and loadings shown on the calculation sheets.

Document prepared for the use of Stephanie Gon from Alpa, Ontario. (Nordic Request 1810-095)



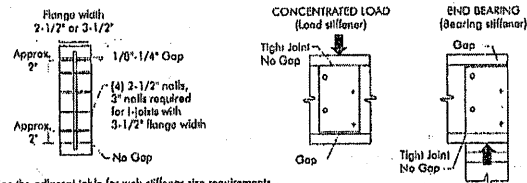
WEB STIFFENERS

RECOMMENDATIONS:

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

FIGURE 2

WEB STIFFENER INSTALLATION DETAILS



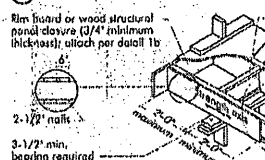
See the adjacent table for web stiffener size requirements

STIFFENER SIZE REQUIREMENTS

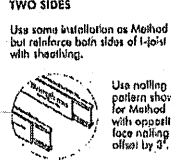
Flange Width	Web Stiffener Size Each Side of Web
2-1/2"	1" x 2-3/16" minimum width
3-1/2"	1-1/2" x 2-3/16" minimum width

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET

Method 1 - SHEATHING REINFORCEMENT ONE SIDE



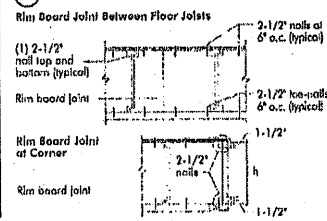
Method 2 - SHEATHING REINFORCEMENT TWO SIDES



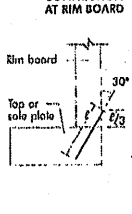
NOTE: Cantilevered sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b. Verify reinforced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

RIM BOARD INSTALLATION DETAILS

a. ATTACHMENT DETAILS WHERE RIM BOARDS ABUT



b. TOE-NAIL CONNECTION AT RIM BOARD



The construction details for residential designs are prone to changes.

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Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

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