

Engineering Notes: EWP-Floors

**MHP 23026**

PLEASE READ ALL INFORMATION BEFORE INSTALLATION OF THE COMPONENT

RESPONSIBILITIES

THE RESPONSIBILITY OF THE UNDERSIGNED ENGINEER IS ONLY LIMITED TO THE CALCULATION OF THIS BUILDING COMPONENT FOR THE LOADS AND CONDITIONS SHOWN ON THIS DRAWING.

THE RESPONSIBILITY OF THE UNDERSIGNED IS LIMITED TO THE VERIFICATION OF THE STRUCTURAL CAPACITY OF THE FLOOR JOISTS AND LVL BEAMS BASED ON PLACEMENT AS SHOWN ON THE LAYOUT. THE LOADS APPLIED ARE LIMITED TO THE GRAVITY EFFECTS OF THE SPECIFIED LOADS. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE EFFECT OF WIND, UPLIFT, SEISMIC, LATERAL OR OTHER FORCES, CALCULATION OF ADEQUATE SUPPORT AND ANCHORAGE OF COMPONENTS, AS WELL AS THE DIMENSIONS AND DESIGN LOADS USED TO CALCULATE COMPONENTS ARE THE RESPONSIBILITY OF THE OVERALL BUILDING DESIGNER. FLOOR JOISTS AND OSB RIM BOARD ARE DESIGNED TO CARRY UNIFORMLY DISTRIBUTED LOADS ONLY. POINT LOADS SHOULD BE TRANSFERRED THROUGH THE FLOOR CAVITY WITH TRANSFER BLOCKS. STRUCTURAL ELEMENTS SUCH AS WALLS, POSTS, CONNECTORS, AND TRANSFER BLOCKS ARE THE RESPONSIBILITY OF THE OVERALL BUILDING DESIGNER.

THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF BEING FURNISHED FAULTY OR INCORRECT INFORMATION, SPECIFICATIONS AND/OR DESIGNS.

COMPONENT DESIGN INFORMATION

1. THIS BUILDING COMPONENT IS CERTIFIED AS AN INDIVIDUAL COMPONENT FOR THE LOADS AND CONDITIONS SHOWN ON THE CALCULATION PAGE BASED ON INFORMATION PROVIDED BY KOTT DESIGN.
2. THE BUILDING COMPONENT USED IN CONSTRUCTION MUST BE THE SAME AS INDICATED ON THE DRAWINGS.
3. UNLESS NOTED OTHERWISE ON THE LAYOUT OR BEAM CALCULATION SHEET, MEMBERS CONSISTING OF MULTIPLE PLIES MUST BE CONNECTED AS PER THE DOCUMENT "MULTIPLE MEMBER CONNECTION DETAILS" SHOWN ON PAGE 2 OF THIS DOCUMENT.
4. PASS-THRU TRANSFER BLOCK FRAMING IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.
5. IT IS ASSUMED THAT EACH LVL BEAM WHERE NOT SEATED IN A HANGER IS ATTACHED USING (4) FOUR 3-1/4" COMMON SPIRAL NAILS FOR UP TO 5.5" LONG BEARINGS AND USING (6) SIX 3-1/4" COMMON SPIRAL NAILS FOR BEARINGS EQUAL TO OR LONGER THAN 5.5", UNLESS INDICATED OTHERWISE.

CODE

THIS BUILDING COMPONENT IS DESIGNED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, THE ONTARIO BUILDING CODE, CCMC AND CANADIAN STANDARDS ASSOCIATION GUIDELINES.

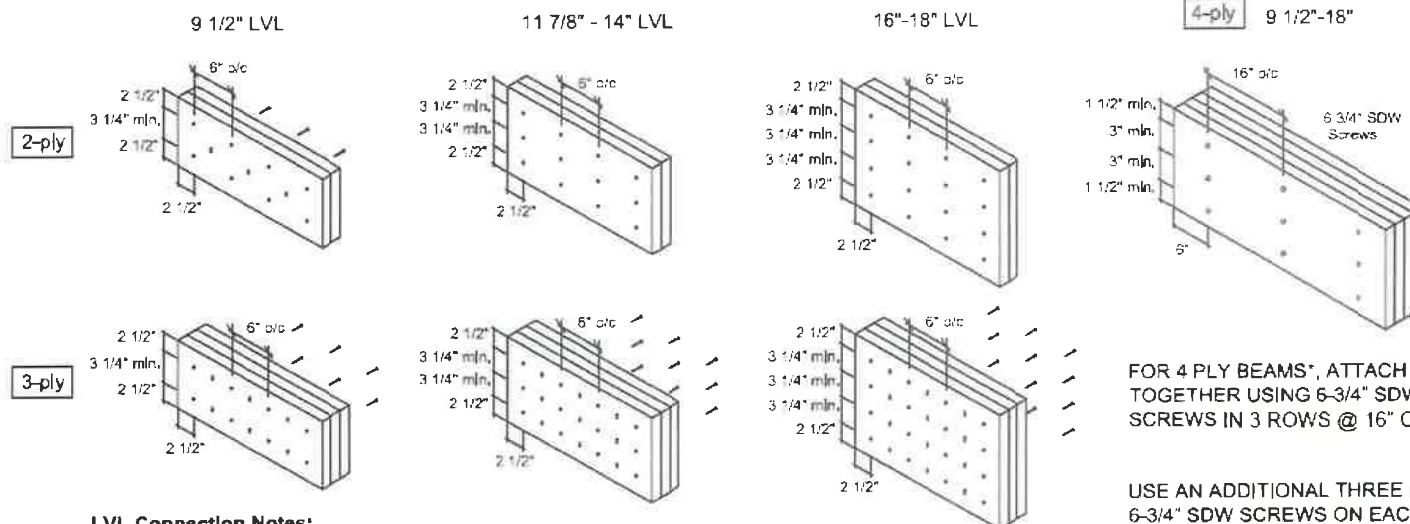
HANDLING AND INSTALLATION

1. DO NOT DRILL ANY HOLE, CUT OR NOTCH A CERTIFIED BUILDING COMPONENT WITHOUT A WRITTEN PRE-AUTHORIZATION.
2. INSTALLATION AND ASSEMBLY OF FLOOR JOISTS AND LVL BEAMS IS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUFACTURER'S LITERATURE.



MULTIPLE MEMBER CONNECTIONS FOR BEAMS SHOWN ON KOTT LAYOUTS

MULTIPLE MEMBER CONNECTIONS FOR UNIFORMLY DISTRIBUTED TOP & SIDE LOADED LVL BEAMS SHOWN ON KOTT LAYOUTS



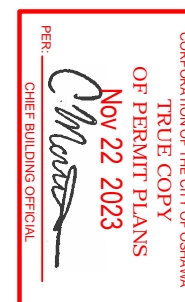
LVL Connection Notes:

- LVL ply width is 1-3/4"
- Nails to be 3 1/2" common wire nails.
- Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Minimum 3 1/4" spacing between rows.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.
- Head of all specified screws must be on the loaded side.

FOR 4 PLY BEAMS*, ATTACH PLYS TOGETHER USING 6-3/4" SDW SCREWS IN 3 ROWS @ 16" C/C.

USE AN ADDITIONAL THREE (3) 6-3/4" SDW SCREWS ON EACH SIDE (OF EACH FACE) AT POINT LOAD LOCATIONS @ 1/2" SPACING, WHERE APPLICABLE.

*UNLESS NOTED OTHERWISE ON LAYOUT OR CALCULATION SHEET OF BEAM IN THE FLOOR PACKAGE



MHP 23026

FOR MULTIPLE MEMBER CONNECTION OF BOISE ALLJOISTS REFER TO THE BOISE CASCADE INSTALLATION GUIDE

Installation Guide



(Open your phone's camera and hover over this QR code to access it!)

1. All blocking to be cut from 12" joists
2. 2' & 4' Lengths to be cut from 8" Length, 6" lengths to be cut from 12" Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams & attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings, Architect to review and approve the deviation prior to construction.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load
13. Confirmation of adequate support & anchorage of components is the responsibility of the building designer; suggested uplift connectors are as shown
14. Where beam hangers on side of 3-ply member, it is recommended that the required quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member.



(Open your phone's camera and hover over this QR code to access it)

Label	Description	Width	Depth	Qty	Pfies	Pcs	Length
F6	Versa-Lam LVL 2,1E 3100 SP	1,75	9,5	1	3	3	14-0
F11	Versa-Lam LVL 2,1E 3100 SP	1,75	9,5	1	2	2	6-0
F5	Versa-Lam LVL 2,1E 3100 SP	1,75	9,5			2	4-0
FH5	Versa-Lam LVL 2,1E 3100 SP	1,75	9,5	1	2	2	4-0

L Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	AJS 140	2.5	9.5			3	14'-0"
F3	AJS 140	2.5	9.5			4	12'-0"
F2	AJS 140	2.5	9.5			2	4'-0"
F1	AJS 140	2.5	9.5			2	2'-0"
J4	AJS 140	2.5	9.5			3	16'-0"
J3	AJS 140	2.5	9.5			15	14'-0"
J2	AJS 140	9.5				35	12'-0"
J1	AJS 140	2.5	9.5	3	2	6	12'-0"
J5	AJS 140	2.5	9.5			2	10'-0"

Label	Description	Width	Depth	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5	13	12-0

Blocking						
Label	Description	Width	Depth	Qty	Pcs	Length
BL K1	A.I.S 140	2.5	9.5	1 in Ft	Varies	38-0=

Hanger		Beam/Girder	Supported Member
Label	Pcs	fasteners	fasteners
H1	23	10 10x1 1/2	1 #8x1 1/4WS
H2	1	LF359	2 #8x1 1/4WS
H3	3	HU310-2	6 10d
H4	2	HU1.81/10	10 16d

JOB INFORMATION	
Builder	GREENPARK
Project	
Shipping	ZADORRA ESTATES OSHAWA, ON
Sales Rep	RALPH MIRIGELLO
Designer	W C
Plotted	July 03, 2023
Layout Name	RIVER 9-2 STD
Job Path	S:\CUSTOMERS\GREENPARK\ZADORRA ESTATE 9-2 STD\SI

DESIGN CRITERIA	
Ground Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 OBC 2012 (2020 Update)

Floor	Description	Quantity
Lives	Live	40
Dead	Dead	15
Delet	Delet	
LL Spa	LL Spa	360
TL Spa	TL Spa	240
Delet	Delet	
LL Spa	LL Spa	360
TL Spa	TL Spa	240
Delet	Delet	
LL Spa	LL Spa	360
TL Spa	TL Spa	240
Delet	Delet	
LL Span L	LL Span L	360
TL Span L	TL Span L	240

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

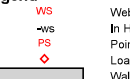
CCMC References

Boise - 12472-R, 12787-R
LP - 12412-R, Roseburg - 13310-R
Forex - 14056-R

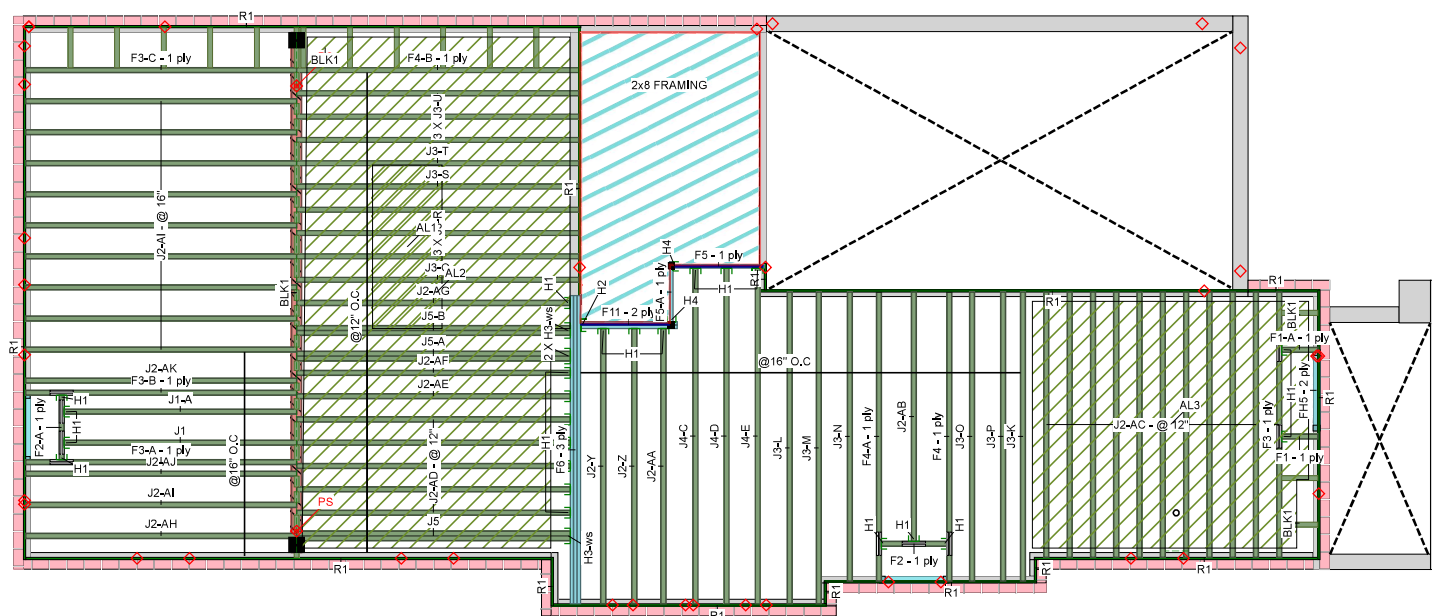
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Ontario
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905-642-4400

Legend

- WS Web Stiffener
- WS In Hanger Label Denotes Web Stiffener
- Point Load Support
- Load from Above
- Wall
- Wall Opening
- Norbord Rimboard Plus 1,125 X 9,5
- AJS 140 9,5
- Versam-Lam LVL 2,1E 3100 SP 1,75 X 9,5
- 1,75 X 9,5 (Dropped)
- 5,25 X 8 (Dropped)



The diagram shows a cross-section of a wall assembly. From top to bottom, the layers are: a grey layer (Wall), a hatched layer (Wall Opening), a green layer (Norbord Rimboard Plus 1,125 X 9,5), a yellow layer (AJS 140 9,5), a blue layer (Versam-Lam LVL 2,1E 3100 SP 1,75 X 9,5), and a red layer (1,75 X 9,5 (Dropped)). A vertical line on the left indicates a point load support. A horizontal line on the right indicates a load from above. A vertical line on the far right indicates a wall stiffener (WS). A horizontal line on the far right indicates a web stiffener in the hanger label.



Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

Ground Floor

ENG-IM0723-022-KTE-GREENPARK-ZADORRA ESTATES-RIVER 9-2

1. All blocking to be cut from 12" joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
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13. Confirmation of adequate support & anchorage of components is the responsibility of the building designer, suggested uplift connectors are as shown
14. Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member

Installation Guide



[Open your phone's camera and hover over this QR code to access it]

Ground Floor LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F6	Versa-Lam LVL 2.1E 3100 SP	1,75	9,5	1	3	3	14-0-0
F11	Versa-Lam LVL 2.1E 3100 SP	1,75	9,5	1	2	2	6-0-0
FH5	Versa-Lam LVL 2.1E 3100 SP	1,75	9,5	2	2	4	4-0-0
F5	Versa-Lam LVL 2.1E 3100 SP	1,75	9,5			2	4-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	AJS 140	2,5	9,5			3	14-0-0
F3	AJS 140	2,5	9,5			2	12-0-0
F2	AJS 140	2,5	9,5			1	4-0-0
F1	AJS 140	2,5	9,5			2	2-0-0
J4	AJS 140	2,5	9,5			3	16-0-0
J3	AJS 140	2,5	9,5			15	14-0-0
J2	AJS 140	2,5	9,5			37	12-0-0
J5	AJS 140	2,5	9,5	3	2	6	12-0-0

Rim Board

Label	Description	Width	Depth	Pcs	Length
R1	Norbord Rimboard Plus 1,125 X 9,5	1,125	9,5	13	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Pcs	Length
BLK1	AJS 140	2,5	9,5	Varies	Varies	38-0-0

Hanger

Label	Pcs	Description	Beam/Girder fasteners	Supported Member fasteners
H1	21	LF259	10 10dx1 1/2	1 #8x1 1/4WS
H2	1	LF359	10 10d	2 #8x1 1/4WS
H3	3	HU310-2	14 16d	6 10d
H4	2	HUS1,81/10	30 16d	10 16d

JOB INFORMATION

Builder	GREENPARK
Project	ZADORRA ESTATES OSHAWA ON
Sales Rep	RALPH MIRIGELLO
Designer	W C
Plotted	July 03, 2023
Layout Name	RIVER 9-2 DC
Job Path	S:\CUSTOMERS\GREENPARK\ZADORRA ESTATES MODELS\RIVER 9-2\F-RIVER 9-2\DECK CONDITION\RIVER 9-2 DC.dwg

DESIGN CRITERIA

Ground Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 OBC 2012 (2020 Update)

Floor Joist

Loads	
Live	40
Dead	15
Deflect	
LL Span	360
TL Span	240
Deflect	
LL Span	360
TL Span	240
Deflect	
LL Span	360
TL Span	240
Deflect	
LL Span	360
TL Span	240

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

CCMC References

Boise - 12472-R, 12787-R
LP - 12412-R, Roseburg - 13311-R
Forex - 14055-R

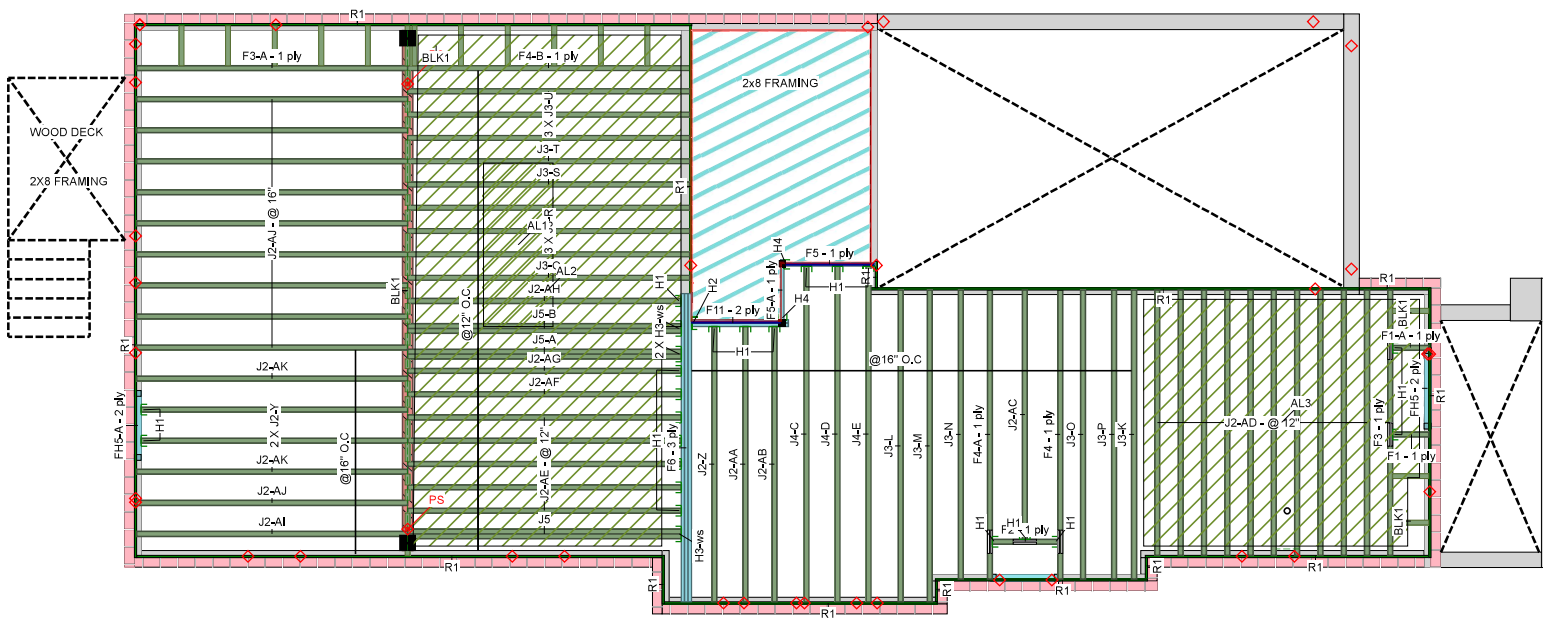
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Ontario

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905-642-4400

Legend

WS	Web Stiffener
-WS	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
Wall	Wall
Wall Opening	Wall Opening
Norbord Rimboard Plus 1,125 X 9,5	Norbord Rimboard Plus 1,125 X 9,5
AJS 140 9,5	AJS 140 9,5
Versa-Lam LVL 2.1E 3100 SP 1,75 X 9,5	Versa-Lam LVL 2.1E 3100 SP 1,75 X 9,5
1,75 X 9,5 (Dropped)	1,75 X 9,5 (Dropped)
5,25 X 8 (Dropped)	5,25 X 8 (Dropped)



Hatch Area represents where additional load has been applied, (e.g. 5 psf for ceramic tile)

CORPORATION OF THE CITY OF OSHAWA
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OF PERMIT PLANS
Nov 27, 2023
J. Moore
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MHP 23026

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