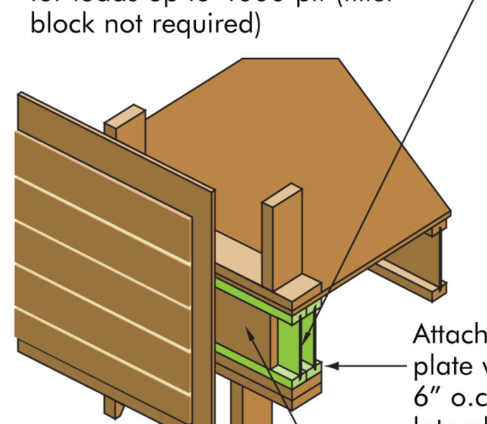
RFPI Joist Placement Presentation

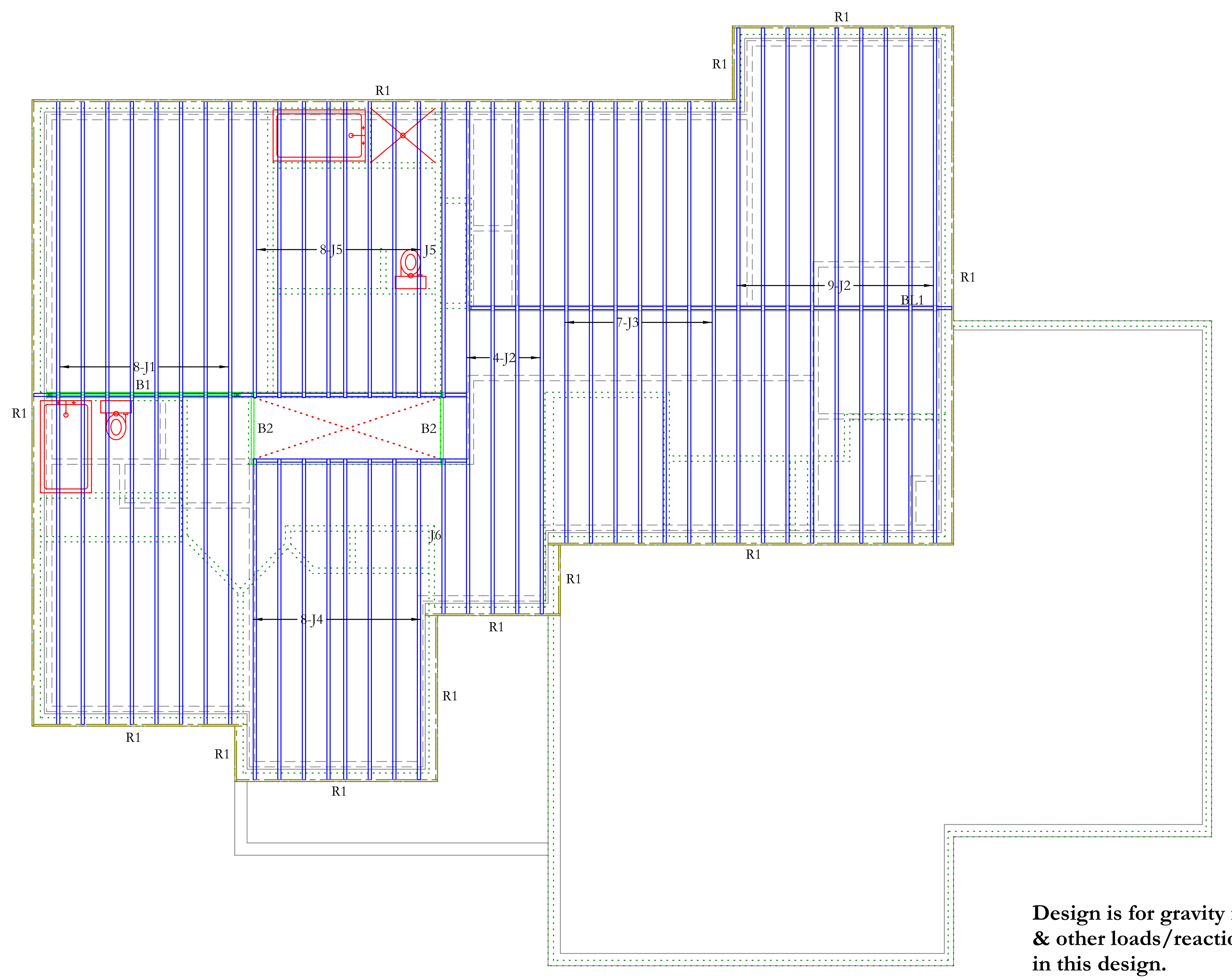
Subject to review by engineer

Skyline - 7213 Hamden Ave
Main floor system
I-joists spaced 16"oc
Placement presentation
Layout per details on page A4.1
Options for detail 1f

1f RIM JOIST AT PARALLEL WALL



RigidRim® Rimboard may be used in lieu of I-joists. Backer is not required when RigidRim® Rimboard is used.



Project designer

Rockwell Homes
3539 BRIAR CREEK LN STE E
IDAHO FALLS, ID 83401 (208) 542-9300

Skyline -- 7213 Hamden Ave						Thursday, March 11, 2021
Main floor system						Job # RFP 21-078
I-joists spaced 16"oc						Plan date: 2-1-21
Place joists to allow penetrations						Rockwell Homes
Verify prior to bid & construction						Ph: 280.542.9300
Mark	**Material**	**Width**	**Depth**	**Quantity**	**Cut Length**	**Total Length**
Blocking						
BL1	RFPI 400	2 1/16	11 7/8	1	54'	54'
					Subtotal	**54'**
Joists						
J1	RFPI 400	2 1/16	11 7/8	8	34'	272'
J2	RFPI 400	2 1/16	11 7/8	13	28'	364'
J3	RFPI 400	2 1/16	11 7/8	7	24'	168'
J4	RFPI 400	2 1/16	11 7/8	8	18'	144'
J5	RFPI 400	2 1/16	11 7/8	9	17'	153'
J6	RFPI 400	2 1/16	11 7/8	1	9'	9'
					Subtotal	**1110'**
LVLs						
B1	2-Ply 2.1E RigidLa	1 3/4	11 7/8	2	11'	22'
B2	2.1E RigidLam	1 3/4	11 7/8	2	4'	8'
					Subtotal	**30'**
RIMs						
R1	Rimboard	1 1/8	11 7/8	1	190'	190'
					Subtotal	**190'**
						1520 SF
Detail 1f Option						
If carrying load is more than 2000# plf but less than 4000# plf -- 2-ply i-joist required						
Add	RFPI 400	2 1/16	11 7/8	1	164'	164'
Subtract	Rimboard	1 1/8	11 7/8	1	82'	82'
If carrying load is 2000# plf or less -- 1-ply i-joist required						
Add	RFPI 400	2 1/16	11 7/8	1	82'	82'
Subtract	Rimboard	1 1/8	11 7/8	1	82'	82'
Project designer to select option by circling it prior to submitting for permit. Sign below						

Roseburg Forest Products Engineered Wood Products Code Report Index:

ICC ESR-1251	I-Joists
ICC ESR-1210	LVL & LVL Rim
City of Los Angeles RR25439	I-joists
City of Los Angeles RR25680	LVL
California DSA PA 131	I-Joists
California DSA PA 136	LVL
California DSA AC 23-1	I-Joists
PR-L259 (RFPI Joists)	
PR-L289 (RigidLam LVL)	
PR-L270 (RigidLam Studs)	
CCMC 13323-R (Canada)	I-Joists
CCMC 13310-R (Canada)	LVL

This i-joist placement diagram is to supplement the architectural and structural drawings for this project, it is not intended to replace those documents. Refer to all plans and details when constructing this project.

Drafting service has created this i-joist placement diagram from architectural and structural drawings supplied by others. Verify design and product selection with architect or engineer of record. No liability for errors, omissions or engineering. We are not engineers and are not responsible for the design of this project.

Design is for gravity floor loads. Roof & other loads/reactions are not considered in this design.

Default loads -- verify actual

DESIGN LOADS			
LIVE LOAD	40	#	PSF
DEAD LOAD	10	#	PSF
TOTAL LOAD	50	#	PSF

Notes:

1. Please see installation guide for installation details.
2. All interior walls shown on plan are bearing.
3. Interior non-bearing walls are omitted or dashed.
4. Any deviations from this design may possibly alter engineering specifications.

Web Stiffeners:
Web stiffeners shall be used for hardware connections where needed. See Simpson Strong-tie or USP Connector Manual for additional details. See Roseburg Forest Products Design Guide for additional information relating to Web Stiffeners.

Adjust joist placement to allow penetrations.

Included span presentation shows clear spans

Included Roseburg Installation Guide to be used for installation.

TABLE 1: RIGIDRIM RIMBOARD DESIGN CAPACITIES [1][2][3]

	Rimboard Thickness (in)	Horizontal Load (plf)	Vertical Load (plf) depth ≤ 16"	1/2" Lag Screw Load (lbs)[4]	Post Load (lbs)
RigidRim® OSB	1-1/8"	180 (8d box or common)	4,400	350	3,500
RigidRim® Plus OSB	1-1/8" or 1-1/4"	200 (8d box or common)	4,850	350	3,500
1.4E RigidRim® LVL	1-1/2"	215 (8d box or common)	4,900	400	3,500
1.4E RigidRim® LVL	1-3/4"	215 (8d box or common)	5,500	400	3,500

(1) All design properties assume rimboard nailing of 8d nails @ 6" on-center. Additional nailing does not guarantee additional load capacity. Refer to APA document Y250 for additional load transfer details.
(2) All design values, except Horizontal Load, are based on a 10-year load duration (100%) and should be adjusted for other load durations in accordance with the applicable code. Horizontal Load may not be adjusted for duration of load.
(3) The 16d (box or common) nails used to connect the bottom plate of a wall to the rimboard through the sheathing do not reduce the horizontal load capacity of the rimboard provided that the 8d nail spacing (sheathing to rimboard) is 6" o.c. and the 16d nail spacing (bottom plate to sheathing to rimboard) is in accordance with the prescriptive requirements of the applicable code.
(4) Allowable load for lag screw installed perpendicular to wide face of rimboard.

Allowable Floor Clear Spans For RFPI®-Joists

40 PSF LIVE LOAD AND 10 PSF DEAD LOAD

Joist Depth	Joist Series	40/10 Simple Span 12" o.c.	40/10 Simple Span 16" o.c.	40/10 Simple Span 19.2" o.c.	40/10 Simple Span 24" o.c.	40/10 Multiple Span 12" o.c.	40/10 Multiple Span 16" o.c.	40/10 Multiple Span 19.2" o.c.	40/10 Multiple Span 24" o.c.
11-7/8"	RFPI 20	20' - 6"	18' - 9"	17' - 9"	16' - 6"	22' - 4"	20' - 5"	18' - 10"	15' - 3"
	RFPI 40S	21' - 5"	19' - 7"	18' - 6"	16' - 8"	23' - 5"	20' - 5"	18' - 7"	16' - 7"
	RFPI 400	21' - 5"	19' - 7"	18' - 6"	17' - 3"	23' - 4"	21' - 4"	20' - 1"	17' - 9"
	RFPI 40	22' - 1"	20' - 2"	19' - 0"	17' - 9"	24' - 1"	22' - 0"	20' - 8"	19' - 3"
	RFPI 60S	22' - 7"	20' - 8"	19' - 6"	18' - 2"	24' - 8"	22' - 6"	21' - 2"	19' - 7"
	RFPI 70	23' - 7"	21' - 6"	20' - 3"	18' - 10"	25' - 8"	23' - 5"	22' - 0"	19' - 9"
	RFPI 80S	24' - 11"	22' - 8"	21' - 4"	19' - 11"	27' - 1"	24' - 8"	23' - 3"	21' - 7"
	RFPI 90	26' - 6"	24' - 1"	22' - 8"	21' - 1"	28' - 10"	26' - 3"	24' - 8"	22' - 11"

Notes:

- Clear span is the clear distance between the face of supports.
- Spans are based on uniform loads as shown above. Use appropriate software (e.g. Simpson Strong-Tie® Component Solutions™) or engineering analysis for other loading.
- Web stiffeners are not required for spans shown but may be required for hangers.
- Maximum deflection is limited to L/480 for live load and L/240 for total load.
- A minimum of 1-3/4" is required for end bearing, 3-1/2" for intermediate bearing.
- Multiple Span lengths shown require adequate bottom flange lateral bracing.
- Spans are based on composite action with glued-nailed sheathing meeting the following APA requirements:

2-PLY 1-3/4" 2.1E RIGIDLAM® LVL - 100% FLOOR (PLF)

Span (ft.)	Depth	4-3/8"	5-1/2"	7-1/4"	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"	20"	22"	24"
6	LL	333	641	1,385	-	-	-	-	-	-	-	-	-	-
	TL	496	957	1,553	2,093	2,165	2,697	2,901	3,655	4,466	5,398	6,478	7,748	9,259
	BRG	1.5 / 3	1.5 / 3	1.8 / 4.5	2.4 / 6	2.5 / 6.2	3.1 / 7.7	3.3 / 8.3	4.2 / 10.5	5.1 / 12.8	6.2 / 15.5	7.4 / 18.6	8.9 / 22.2	10.6 / 26.5
8	LL	144	281	621	1,228	1,321	-	-	-	-	-	-	-	-
	TL	212	416	925	1,472	1,519	1864	1,993	2,459	2,939	3,464	4,043	4,682	5,392
	BRG	1.5 / 3	1.5 / 3	1.5 / 3.5	2.3 / 5.6	2.3 / 5.8	2.9 / 7.1	3.1 / 7.6	3.8 / 9.4	4.5 / 11.2	5.3 / 13.3	6.2 / 15.5	7.2 / 17.9	8.2 / 20.6
10	LL	74	146	327	658	710	1,138	1,321	-	-	-	-	-	-
	TL	108	215	485	979	1,056	1,423	1,517	1,851	2,188	2,548	2,935	3,351	3,800
	BRG	1.5 / 3	1.5 / 3	1.5 / 3	1.9 / 4.7	2 / 5.1	2.7 / 6.8	2.9 / 7.3	3.5 / 8.9	4.2 / 10.5	4.9 / 12.2	5.6 / 14.1	6.4 / 16.1	7.3 / 18.2
12	LL	43	85	193	391	422	684	796	1,258	-	-	-	-	-
	TL	61	123	283	578	625	1,016	1,172	1,484	1,742	2,014	2,302	2,608	2,932
	BRG	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.5 / 3.6	2.3 / 5.9	2.7 / 6.8	3.4 / 8.5	4 / 10	4.6 / 11.6	5.3 / 13.3	6 / 15	6.7 / 16.9
14	LL		54	123	250	270	441	514	820	1,189	1,639	-	-	-
	TL		76	177	367	397	651	761	1,170	1,446	1,664	1,893	2,133	2,385
	BRG		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.8 / 4.4	2.1 / 5.1	3.2 / 7.9	3.9 / 9.7	4.5 / 11.2	5.1 / 12.7	5.7 / 14.3	6.4 / 16
16	LL		36	83	169	183	300	350	562	820	1,138	1,519	-	-
	TL		50	118	246	266	440	515	831	1,149	1,417	1,607	1,804	2,009
	BRG		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.4	1.6 / 4	2.6 / 6.4	3.5 / 8.9	4.4 / 10.9	4.9 / 12.4	5.6 / 13.9	6.2 / 15.5

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SUNPRO

Skyline
Idaho
for
Sunpro.build

JOB: RFP 21-078
SCALE: 1/4"
DRAWN: K&R Design
DATE: 3-11-21

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SHEET: 1 OF 1

PRODUCT PLACEMENT DRAWING by K & R Design, LLC
Structural and dimensional checks shall be made by the architect or engineer of record to assure accuracy of product selection and capability. The purchaser is to check and approve all dimensions, quanitities, loads and details carefully. No liability is assumed by the drafting service.

First Floor Framing

NOTE:
ALL MEASUREMENTS TO BE VERIFIED IN THE FIELD