GENERAL NOTES

DESIGN NOTES

- 1. Floor: 40 lbs. Live load, 15 lbs. Dead load
- 2. Roof: 30 lbs. Live load, 20 lbs. Dead load 3. Soil bearing capacity-2000 PSF
- 4. Live loads, dead loads, wind loads, snow loads, lateral loads, seismic zoning and any specialty loading
- conditions will need to be confirmed before construction and adjustments to plans made accordingly. See your local building officials for verification of your specific load data, zoning restrictions and site 5. Provide collar ties, cross-bridging and bracing as required. conditions.

CONCRETE AND FOUNDATIONS

- 1. All slabs on grade shall be 4 inch 3000 PSI (28-day compressive strength concrete), unless noted
- 2. All slabs on grade shall bear on four inch compacted granular fill with 6 by 6 10-10 welded wire mesh.

 MISC. NOTES
- Interior slabs shall have 6 mil, polyethylene vapor barrier underneath.
- 4. Provide proper expansion joints and control joints as per local requirements. 5. Provide additional bearing points as required by floor "I" joist manufacturer, and loading transfers.
- 6. Foundation details may vary with local codes and conditions, verify with contractor or engineer. 7. Provide foundation access and vents as required by local codes and conditions.
- 8. Foundation wall and footing sizes reinforcing must conform with your local building requirements.
- 9. Foundation walls are not to be backfilled until house is completely framed and roof is in place. 10. Verify depth of footings with your local codes.

11. Provide termite protection as required by HUD minimum property standards.

BASEMENT

- 1. Basement stairs are calculated as 10 inch treads with 1 inch nosing (11 inch total) and 7.75 inch risers. Water heater and air conditioner may be located in basement when using basement option.
- . Provide sump pumps as required.
- 4. Some soil conditions may require a 12 inch concrete retaining wall, verify with contractor or engineer. 5. Provide exterior windows and door as grade allows.
- 6. Provide venting as local codes and conditions dictate.

FRAMING

- 1. Contractor to confirm the size, spacing and species of all framing and structural members to meet your
- 2. Any structural or framing members not indicated on the plan are to be sized by the contractor.
- 3. Double floor joists under all partition walls, unless otherwise noted.
- 4. All angled walls are 45 degree angles unless noted otherwise.
- 6. Provide additional bearing points as required by loading transfers. 7. Framing lay-out and size may vary with local codes and conditions.
- 8. Roof framing plan is for general layout only, do no use for rafter count.

- 1. Prefabricated fireplaces and flues are to be U.L. approved and installed per manu. specifications. 2. All materials, supplies and equipment to be installed per manu. specifications and local codes.
- 3. Provide type "x" firecode sheetock on garage walls and ceilings.
- 4. Confirm window openings for your local egress requirements and minimum light and venting.
- 5. The mechanical and electrical layouts are suggested only. Consult your mechanical and electrical contractors for exact specifications, locations and sizes.
- 6. Minor alterations to this plan can be made by the builder. Please contact our drafting department for

information price quotes if major changes are required.

This plan was designed and drafted by W.L. Martin Home Designs to meet average conditions and codes in the state of Oklahoma at the time it was designed. Because codes and regulations can change and may vary from jurisdiction to jurisdiction, W.L. Martin Home Designs cannot warrant compliance with any special code or regulation. Consult your local building official to determine the suitability of these plans for your specific site and applicaion.

This plan can be adapted to your local building codes and requirements, but also, it is the responsibility of the purchaser and/or builder of thes plan to see that the structure is built in strict compliance with all governing municipal codes [city,county,state, and federal].

The purchaser and/or builder of this plan releases W.L. Martin Home Designs, its owner and employees from any claims or lawsuits that may arise during the construction of this structure or any time thereafter.

> NOTICE TO CONTRACTOR All construction must comply with current NC Building Codes and is subject to field inspection and verification. **APPROVED** Limited building only review Permit holder responsible for full compliance with the code COUNTY 03/17/2022 NORTH CAROLINA



FRONT ELEVATION

REVISIONS

reek sek eq

Home Martin

w.wlmartinhomes

Scale 1/4" = 1'-0"

Sheet 1

of 8 Sheets

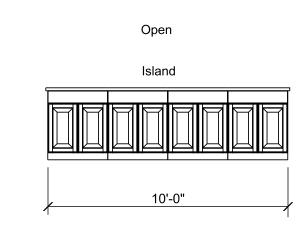
REVISIONS BY

Drawn Noted

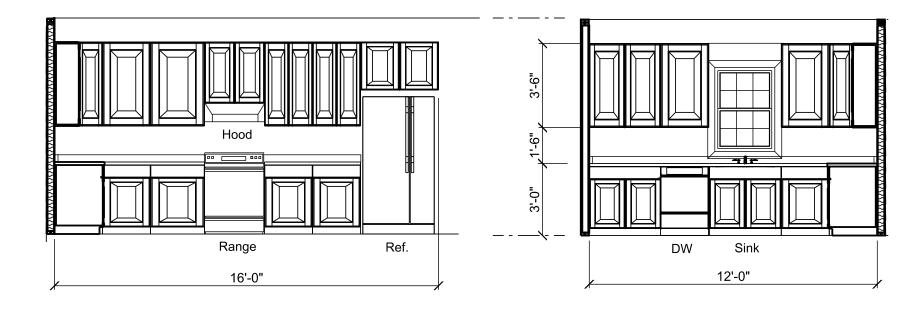
Sheet 2

Sheet 2

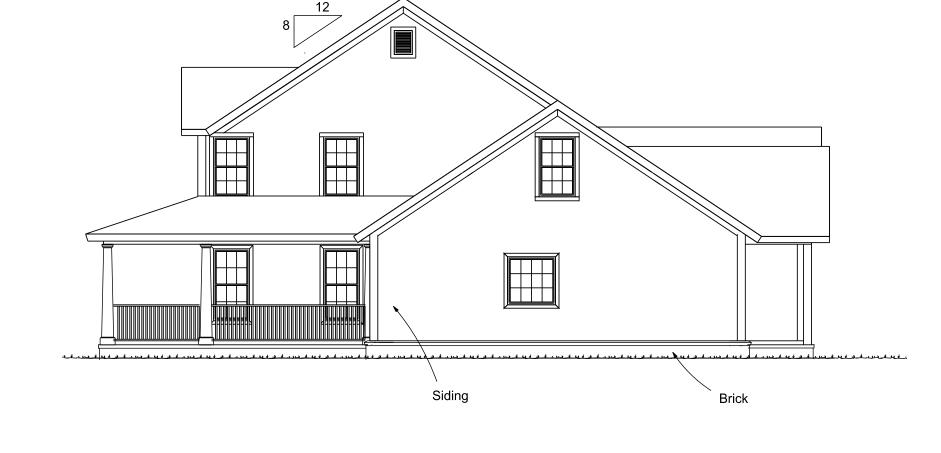
Of 8 Sheets



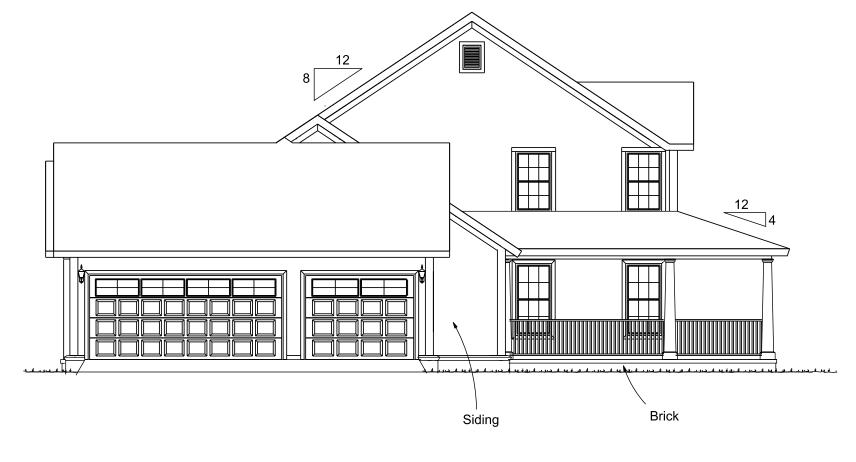
ELEVATION C 1/4" = 1'-0"



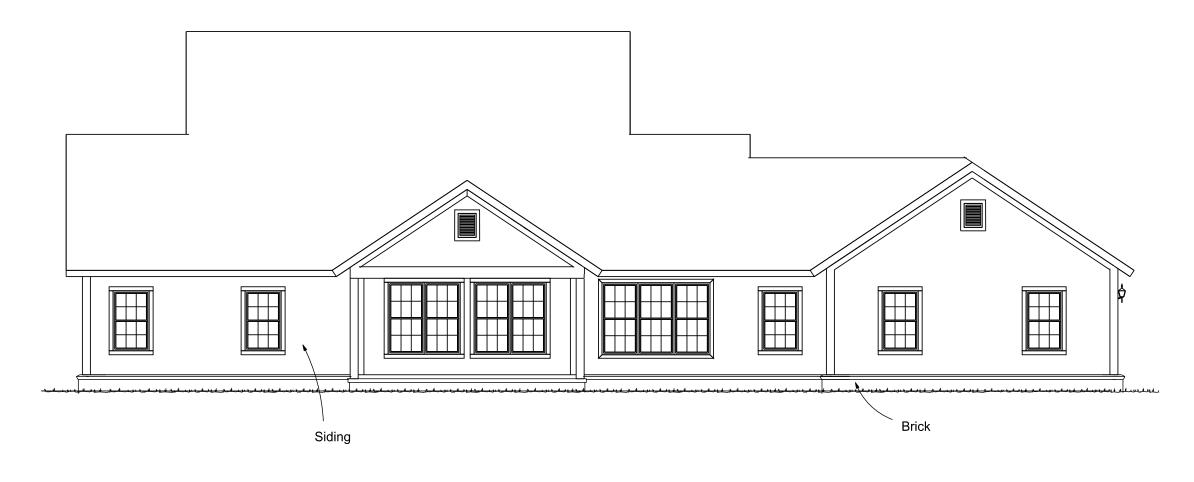
ELEVATION A 1/4" = 1'-0" **ELEVATION B** 1/4" = 1'-0" Selections to be made for Cabinet Style, Color, and Hardware



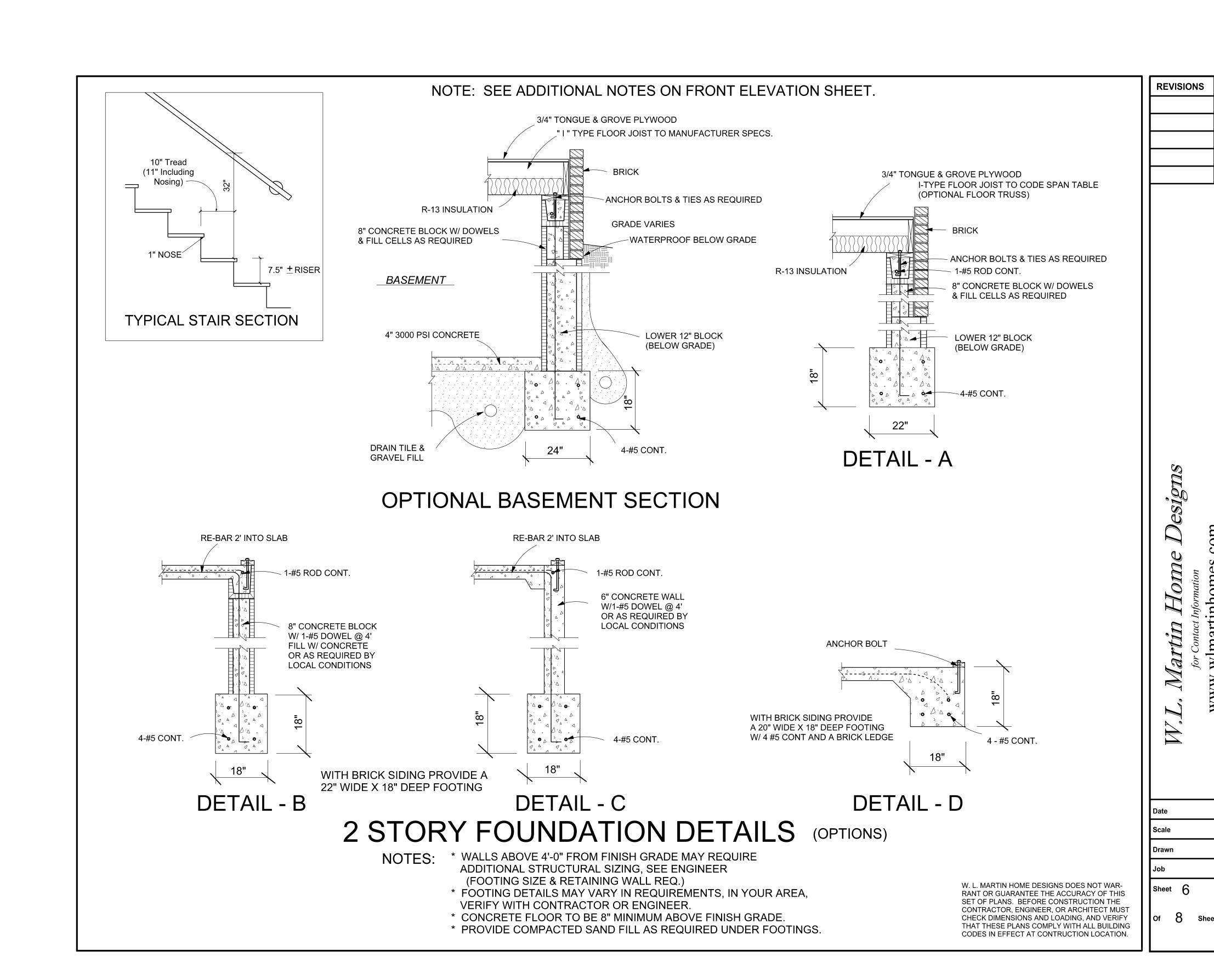
RIGHT SIDE ELEVATION 1/8" = 1'-0"

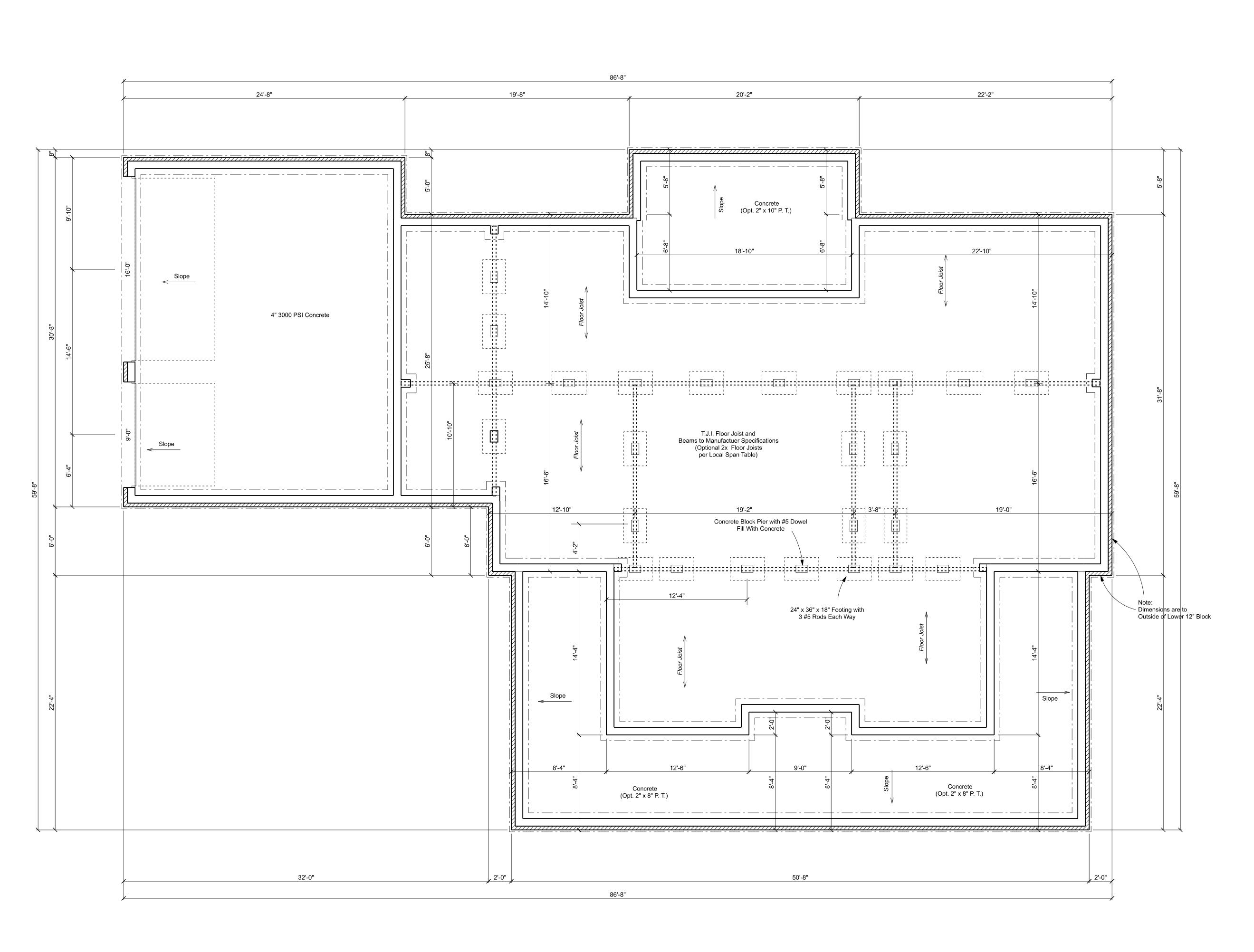


LEFT SIDE ELEVATION 1/8" = 1'-0"



REAR ELEVATION 1/8" = 1'-0"





Crawl Space Foundation Plan

REVISIONS BY

24376 - Cedar Creek

artin Home Design.

ate cale 1/4" = 1'

Drawn

ob

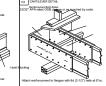
of 8 Shee

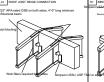
All bracing, blocking, beams, purlins @ 2'0" o.c., ledger, etc. provided by others.
 Roof truss to roof truss connections provided by Riverside Roof Truss.
 Truss to building connections provided by others.

Refer to Sealed drawings for connection detail of multiple ply trusses.

NOT ALL TRUSSES ARE SYMMETRICAL AND MAY NOT PERFORM CORRECTLY IF INSTALLED BACKWARDS. PLEASE REFER TO SEALS WHILE SETTING TRUSSES TO ENSURE TRUSSES ARE ORIENTED CORRECTLY

















Products								
PlotID	Length	Product	Plies	Net Qty				
FJ46	46-00-00	11 7/8" NI-40x	1	10				
FJ40	40-00-00	11 7/8" NI-40x	1	8				
FJ38	38-00-00	11 7/8" NI-40x	1	7				
FJ38-2	38-00-00	11 7/8" NI-40x	2	2				
FJ32	32-00-00	11 7/8" NI-40x	1	14				
FJ26	26-00-00	11 7/8" NI-40x	1	1				
FJ22	22-00-00	11 7/8" NI-40x	1	6				
FJ22-2	22-00-00	11 7/8" NI-40x	2	2				
FJ18	18-00-00	11 7/8" NI-40x	1	3				
FJ16	16-00-00	11 7/8" NI-40x	1	1				
BM2	34-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2				
BM3	34-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2				
BM1	30-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2				
RIM1	12-00-00	1 1/8" x 11 7/8" APA Rim Board	1	20				
Bk1	78-00-00	11 7/8" NI-40x	1	1				

HIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be corporated into the building designer. See individual design sheets for each truss design at the specification of the building designer. See individual design sheets for each truss design at the specification of the building designer. See individual design sheets for each truss design at the specification of the building designer. See individual design sheets for each truss design at the specification of the building designer. See individual design sheets for each truss and permanent bracing of the roof and floor LAYOUT MIST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL constitutions and construction of the building designer. For general quidance regarding and permanent bracing of the building designer. For general quidance regarding and permanent building designer. For general quidance regarding and permanent bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onifrio Drive; Madison, WI 53179.

RIVERSIDE ROOF TRUSS, LLC



Sq.

Roof Surface Area: 0 ft² Sq. Floor Surface Area: 3860 ft²

10/4/2021

S $\boldsymbol{\alpha}$

Smiley

S

21-6482-B

Simpson LUS26 HUS26 HHUS26-2 THJA26

USP JUS26 THD26 THD26-2 HJC26 MSH422

733 RIVER PARK

DRIVE

DANVILLE, VA 24540

(434) 793-0217

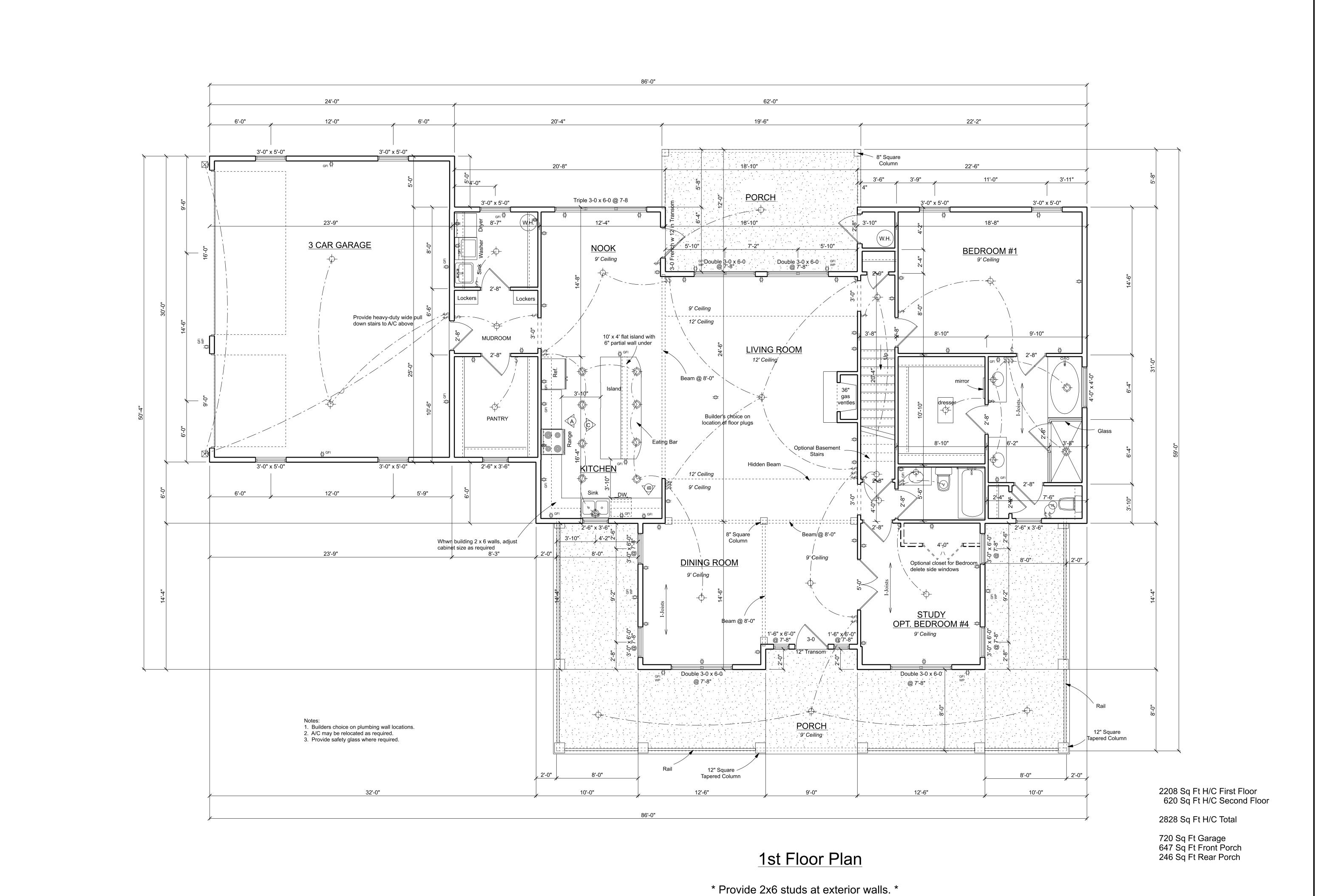
FAX: (434) 799-8767

FLOOR

PARKS BUILDING SUPPLY LASSEK RES. EWP FIRST

Conversion Chart REVIEWED BY

Hanger (



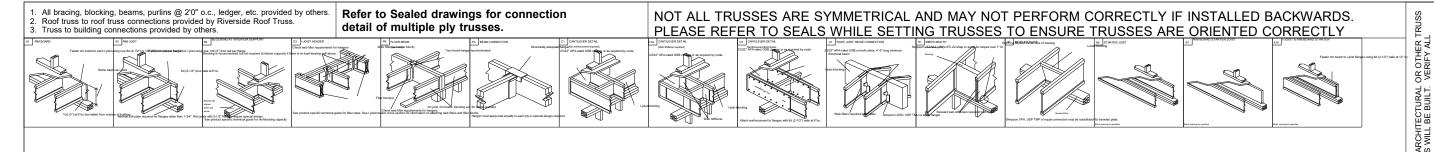
Cedar Creek I For Lassek

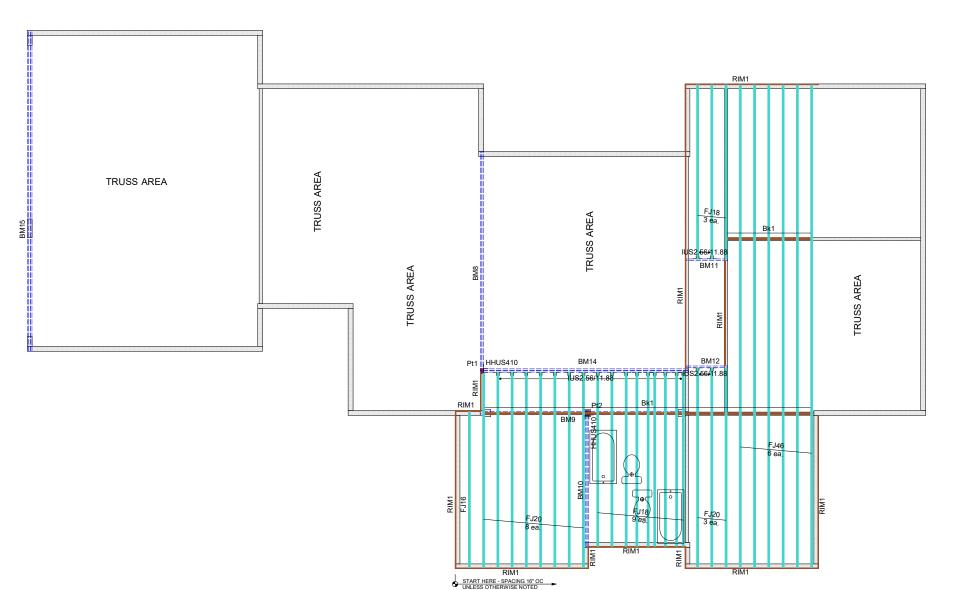
#24376 - (Modified

Designs for Contact Information www.wlmartinhomes.com Home Martin

Scale 1/4" = 1'-0"

Sheet 3





Products								
PlotID	Length	Product	Plies	Net Qty				
FJ46	46-00-00	11 7/8" NI-40x	1	6				
FJ20	20-00-00	11 7/8" NI-40x	1	11				
FJ18	18-00-00	11 7/8" NI-40x	1	12				
FJ16	16-00-00	11 7/8" NI-40x	1	1				
BM14	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	2	2				
BM9	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	2	2				
BM10	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	2	2				
BM11	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	1	1				
BM12	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	1	1				
BM15	30-00-00	1 3/4" x 16" (2.0E 3100) LVL	3	3				
BM8	22-00-00	1 3/4" x 18" (2.0E 3100) LVL	2	2				
RIM1	12-00-00	1 1/8" x 11 7/8" APA Rim Board	1	11				
Bk1	33-00-00	11 7/8" NI-40x	1	1				
Pt1	10-00-00	Glulam Column 3.5 x 5.5	1	1				
Pt2	10-00-00	GluLam Column 5.5x5.5	1	1				

Γ		Connector	Summary
f	Qty	Manuf	Product
Ī	1	Simpson	HHUS410
	1	Simpson	HHUS410
	4	Simpson	IUS2.56/11.88
	16	Simpson	IUS2.56/11.88

DVAL DIDS ALL PREVIOUS AR EFORE ANY TRUSSES V		PARKS BUILDING SUPPL	LASSEK RES. EWP SECC				Designer:
SHOP DRAWING APPROVAL IN OF TRUSSES AND VOIDS. MUST BE RECEIVED BEFOR ILL RESULT IN EXTRA CHAR	APPROVED BY:	BUILD	EK RES		:	Subdivision:	Sales Rep:
SHOP DE COR FABRICATION OF TR JF THIS LAYOUT MUST BI ANGES THAT WILL RESU	APPRO		Job Name: LASS	Model:		. Lot #:	Order #:
SHOP DRAWING APPROVAL THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOU LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSS CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.	REVIEWED BY:	Hanger Conversion Chart Client	Simpson	LUS26	HUS26	HHUS26-2	THJA26
s to be each truss designTHIS LAYC the roof and floorLAYOUTS. lumns, and ce regarding	WI 53179.	Hanger Conv	USP	JUS26	THD26	THD26-2	HJC26
is are designed as individual building components to be individual building components to be individual design sheets for each truss design THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS AF on shall be read in the roof and floor LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES to structure including headers, beams, walls, columns, and CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.	uss Plate Institute, 583 D'Onifrio Drive; Madison,		/ 33 KIVEK PAKK	DRIVE DANNII IE VA 24540	DANVILLE, VA 24340	(434) /93-021 /	LAN. (434) / 33-0/0/
IIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be corporated into the building design at the specification of the building designer. See individual design sheets for each truss design LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES varieties on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floorLAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES varieties. The design of the truss support structure including headers, beams, walls, columns, and CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.	acing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onifrio Drive; Madison, WI 53179.			O 11 Solida accordante	MVERSIDE ROOF IROSS, LLC		Roof Surface Area: 0 ft2 Sq. Ft



0.62

Roof Surface Area: 0 ft² Sq. Ft. Floor Surface Area: 3860 ft² Sq.

10/4/2021

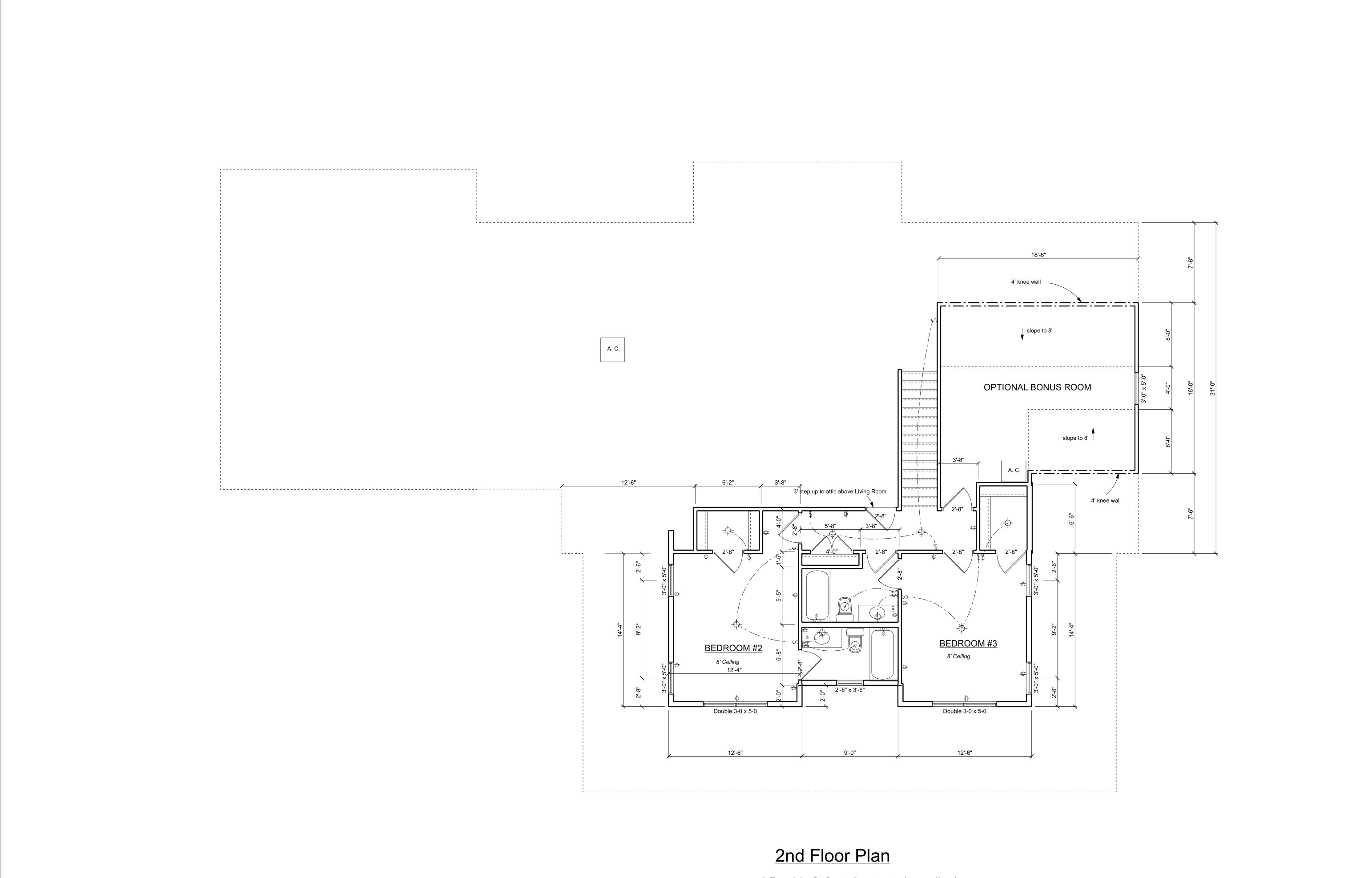
8

Smiley

U

21-6482-B

OND FLOOR



* Provide 2x6 studs at exterior walls. *

REVISIONS

#24376 - Cedar Creek Modified For Lassek

L. Martin Home Designa

Date
Scale 1/4" = 1'-0"

cale 1/4" = *'* Orawn

. 3

8 Sheets

W. L. MARTIN HOME DESIGNS DOES NOT WAR-RANT OR GUARANTEE THE ACCURACY OF THIS SET OF PLANS. BEFORE CONSTRUCTION THE CONTRACTOR, ENGINEER, OR ARCHITECT MUST CHECK DIMENSIONS AND LOADING, AND VERIFY THAT THESE PLANS COMPLY WITH ALL BUILDING CODES IN EFFECT AT CONTRUCTION LOCATION. SHINGLES OVER 15 LB. FELT 1/2" PLYWOOD SHEATHING C/W H CLIPS ROOF TRUSSES @ 24" C/C (Optional Common Frame System, Per Code) ROOF TRUSS DESIGN BY MANU. ENGINEER BUILDING STRAPPING PER LOCAL CODE (TYPICAL) ■ EAVE DRIP R-30 INSULATION ■ 8" FASCIA CORNICE DETAILS MAY VARY 5/8" DRYWALL VENTED SOFFIT SEE FRONT ELEVATION FRIEZE BOARD 2-2X6 TOP PLATES TYPICAL 2X6 SIDING EXTERIOR WALL: SIDING
SHEATHING
2x6 STUDS @ 16" C/C (BRACE AS NEEDED)
R19 INSULATION
1/2" GYPSUM BOARD SEE ELEVATIONS FOR CEILING HEIGHTS BASEBOARD 3/4" TONGUE & GROOVE PLYWOOD BUILDING STRAPPING PER LOCAL CODE (TYPICAL) R-13 INSULATION I-JOISTS TO MANU.ENGINEER'S DESIGN (DESIGN TO CARRY ROOF LOAD WHERE APPLICABLE) SEE ELEVATIONS FOR CEILING HEIGHTS BASEBOARD 1/2" X 9" ANCHOR BOLT @ 4' W/ 7" IMBED (CONCRETE FLOORS) 12" APART @ CORNERS WEEP VENTS EVERY 3RD BRICK SEE FOUNDATION DETAIL SHEET NOTE: ALL STRUCTURAL MEMBERS MUST TYPICAL BUILDING SECTION COMPLY W/ LOCAL BUILDING CODES. 2 x 6 Walls

REVISIONS BY

scale Noted

Sheets

Truss Con	nector Tota	al List
Manuf	Product	Qty
Simpson	HUS26	14

Truss Connector Total List								
Manuf	Product	Qty						
Simpson	HUS26	4						

		Products		
PlotID	Length	Product	Plies	Net Qty
BM1	4-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2

Products							
PlotID	Length	Product	Plies	Net Qty			
BM3	10-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	3	3			
BM1	4-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	3	3			

PLEASE VERIFY-

WILL DEPTH OF BM3 WORK(WILL IT BE IN THE WAY OF THE WINDOWS)

HEEL HEIGHTS WILL WORK (HEEL HEIGHTS HAD TO BE MORE THAN STANDARD TO GET ATTIC ROOF TRUSSES TO WORK)

OVERHANG LENGTH

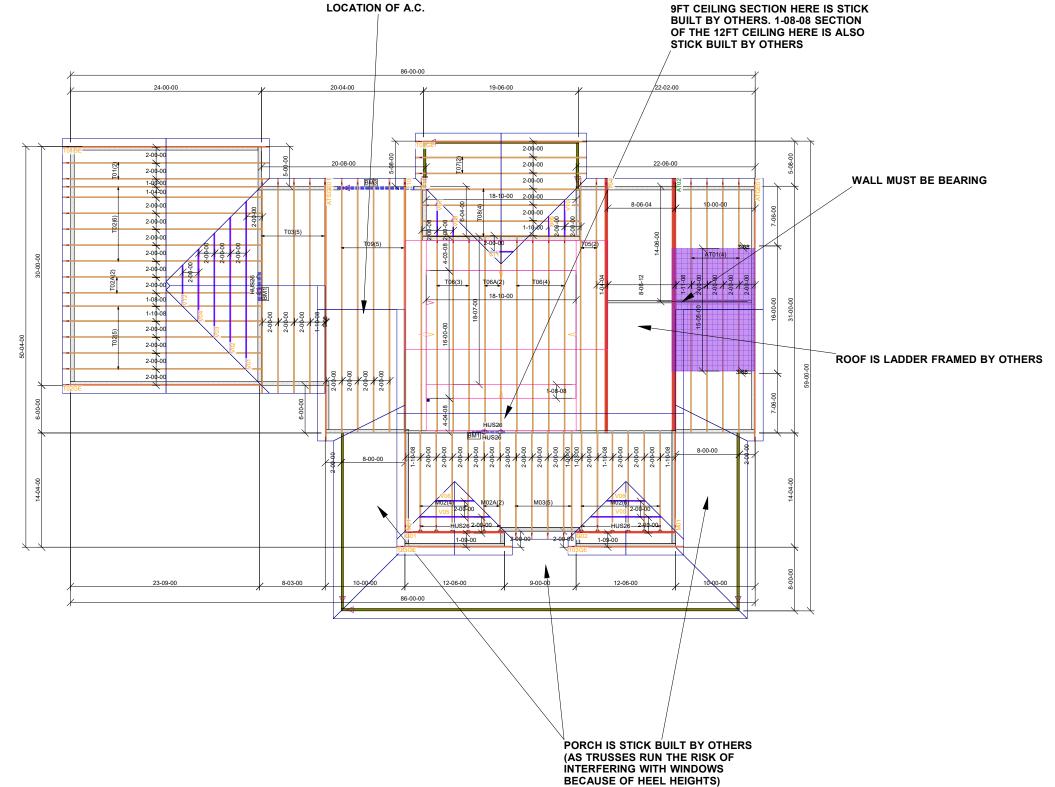
PORCH IS STICK BUILT BY OTHERS (AS TRUSSES RUN THE RISK OF INTERFERING WITH WINDOWS BECAUSE OF HEEL HEIGHTS)

TRAY CEILING DIMENSIONS ARE CORRECT

ARE LOUVERS FALSE, IF NOT WHAT ARE THEIR DIMENSIONS

LOCATION AND DIMENSIONS OF PULL DOWNSTAIRS FOR A/C ABOVE IN GARAGE AND MAIN HOUSE.

IS LOCATION OF A.C. CORRECT







=THIS SYMBOL INDICATES THE LEFT END OF TRUSS - REFER TO SEALED TRUSS DRAWINGS TO AVOID SETTING TRUSSES BACKWARDS!

0 ft²

ft² Sq. ft² Sq.

Roof Surface A

OR OTHER T

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATIO AYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT CONDITIONS TO INSURE AGAINST CHANGES THAT WI

onents to be
s for each truss designT
ng of the roof and floor L
s, columns, and
uidance regarding
ison, WI 53179.

Conversion Chart

RES

SSEK

POSTON-KATIE | 24376 ROOF

Smiley

S

-6482

21

Simpson LUS26 HUS26 HHUS26-2 THJA26

USP JUS26 THD26-7 THD26-2 HJC26 MSH422

DRIVE DANVILLE, VA 24540 (434) 793-0217 FAX: (434) 799-8767

RIVER



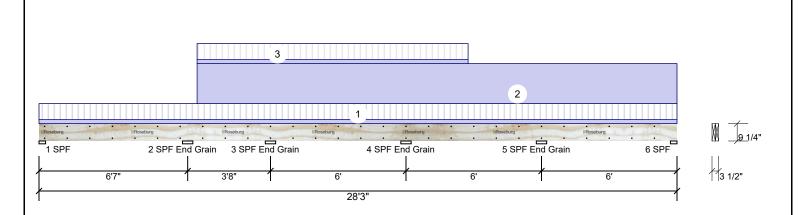
10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS

Project #:

2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED BM₁

Level: Level



Member Information				Rea	Reactions UNPATTERNED lb (Uplift)							
Туре:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const		
Plies:	2	Design Method:	ASD	1	Vertical	1817	476	0	0	0		
Moisture Condition	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	4364	1225	0	0	0		
Deflection LL:	480	Load Sharing:	No	3	Vertical	6137	2105	0	0	0		
Deflection TL:	240	Deck:	Not Checked	4	Vertical	7509	2529	0	0	0		
Importance:	Normal - II			5	Vertical	4350	1804	0	0	0		
Temperature:	Temp <= 100°F			6	Vertical	1583	667	0	0	0		
				Bea	rings							

Δ	na	lveie	Resu	ltc

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-5597 ft-lb	16'3"	13320 ft-lb	0.420 (42%)	D+L	L_LL_
Unbraced	-5597 ft-lb	16'3"	5606 ft-lb	0.999 (100%)	D+L	L_LL_
Pos Moment	4244 ft-lb	13'3 3/8"	13320 ft-lb	0.319 (32%)	D+L	L_L_L
Unbraced	4244 ft-lb	13'3 3/8"	4245 ft-lb	1.000 (100%)	D+L	L_L_L
Shear	3879 lb	15'3"	6259 lb	0.620 (62%)	D+L	L_LL_
LL Defl inch	0.042 (L/1734)	13'3 9/16"	0.150 (L/480)	0.277 (28%)	L	L_L_L
TL Defl inch	0.050 (L/1443)	13'3 1/4"	0.300 (L/240)	0.166 (17%)	D+L	L_L_L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6"
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 18'2 9/16" o.c.
- 7 Bottom must be laterally braced at a maximum of 13'7 3/8" o.c.
- 8 Lateral slenderness ratio based on single ply width.

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used

Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Cap. React D/L lb

476 / 1934

1225 / 5450

2105 / 7557

2529 / 8090

1804 / 4958

667 / 1856

46%

43%

63%

69%

44%

48%

Total Ld. Case

2410 L_L_L

6676 LL_L_

9662 _LL_L

10620 L_LL_

6762 _L_LL

2523 L_L_L

Ld. Comb.

D+L

D+L

D+L

D+L

D+L

D+L

Dir.

Vert

Vert

Vert

Vert

Vert

Vert

Bearing Length 1 - SPF 3.500"

5.500

2 - SPF

End Grain 3 - SPF 5.500"

End Grain 4 - SPF 5.500"

Fnd Grain

End Grain 6 - SPF 3.500"

5 - SPF 5.500"

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Page 1 of 33



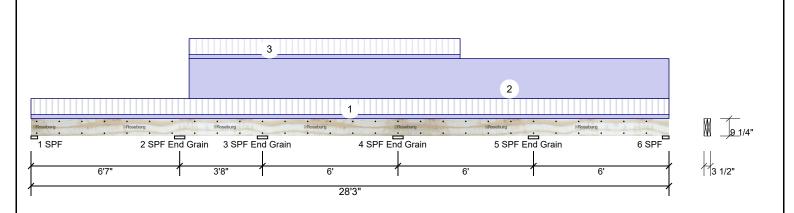
Date: 10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 2 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED BM1

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		16-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	7-0-0 to 28-3-0		Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	7-0-0 to 19-0-0	16-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF					

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024



Date: 10/4/2021

Input by: Richard Stokes

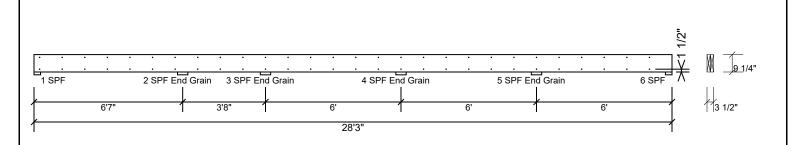
Job Name: 21-6482 BEAM CALCULATIONS

Page 3 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED **BM1**

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024





10/4/2021

Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

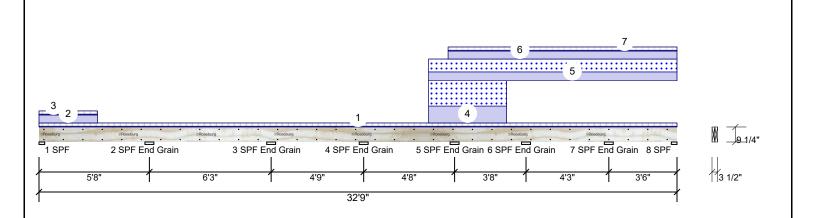
Page 4 of 33

Project #:

2.0E Rigidlam LVL BM₂

1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Infor	mation	Rea	Reactions UNPATTERNED lb (Uplift)										
Туре:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const			
Plies:	2	Design Method:	ASD	1	Vertical	2052	746	0	0	0			
Moisture Condition	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	4338	1245	0 (0)	0	0			
Deflection LL:	480	Load Sharing:	No Not Checked	3	Vertical	3245	838	1	0	0			
Deflection TL:	240	Deck:		4	Vertical	2695	709	1	0	0			
Importance:	Normal - II			5	Vertical	3702	2148	1480	0	0			
Temperature:	Temp <= 100°F						6	Vertical	4848	2323	969	0	0
				7	Vertical	5081	2150	626	0	0			
				8	Vertical	1698	742	240	0	0			

lnal	vsis	Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3356 ft-lb	5'8"	13320 ft-lb	0.252 (25%)	D+L	LL_L_L_
Unbraced	-3356 ft-lb	5'8"	3356 ft-lb	1.000 (100%)	D+L	LL_L_L_
Pos Moment	2977 ft-lb	2'4 7/8"	13320 ft-lb	0.224 (22%)	D+L	L_L_L_L
Unbraced	2977 ft-lb	2'4 7/8"	2979 ft-lb	0.999 (100%)	D+L	L_L_L_L
Shear	2281 lb	4'8"	6259 lb	0.364 (36%)	D+L	LL_L_L_
LL Defl inch	0.024 (L/2683)	2'9 3/16"	0.136 (L/480)	0.179 (18%)	L	L_L_L_L
TL Defl inch	0.030 (L/2165)	2'8 5/8"	0.272 (L/240)	0.111 (11%)	D+L	L_L_L_L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Tie-down connection required at bearing 4 for uplift 52 lb (Combination D+L, Load Case _L__L_L).
- 7 Top must be laterally braced at a maximum of 26'2 1/16" o.c.
- 8 Bottom must be laterally braced at a maximum of 23'2 1/8" o.c.
- 9 Lateral slenderness ratio based on single ply width.

Reactions UNPATTERNED Ib (Uplift)

Dig	Direction	LIVC	Dcau	OHOW	VVIIIG	Const
1	Vertical	2052	746	0	0	0
2	Vertical	4338	1245	0 (0)	0	0
3	Vertical	3245	838	1	0	0
4	Vertical	2695	709	1	0	0
5	Vertical	3702	2148	1480	0	0
6	Vertical	4848	2323	969	0	0
7	Vertical	5081	2150	626	0	0
8	Vertical	1698	742	240	0	0
Roa	rings					

JBearings

	9 -							
	Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1	1 - SPF	3.500"	Vert	58%	746 / 2279	3026	L_L_L_L	D+L
	2 - SPF End Grain	5.500"	Vert	37%	1245 / 4505	5750	LL_L_L_	D+L
	3 - SPF End Grain	5.500"	Vert	31%	838 / 3874	4711	_LL_L_L	D+L
	4 - SPF End Grain	5.500"	Vert	27%	709 / 3456	4164 (-52)	L_LL_L_	D+L(D+L)
	5 - SPF End Grain	5.500"	Vert	43%	2148 / 4519	6667	_L_LL_L	D+0.75(L+S)
	6 - SPF End Grain	5.500"	Vert	51%	2323 / 5527	7850	L_L_LL_	D+L
	7 - SPF End Grain	5.500"	Vert	49%	2150 / 5424	7574	_L_L_LL	D+L

742 / 2082

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
 2 Damaged Beams must not be used

- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

8 - SPF 3.500"

Vert

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES:

Manufacturer Info

ESR-1210

54%

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

D+L

2823 L_L_L_L



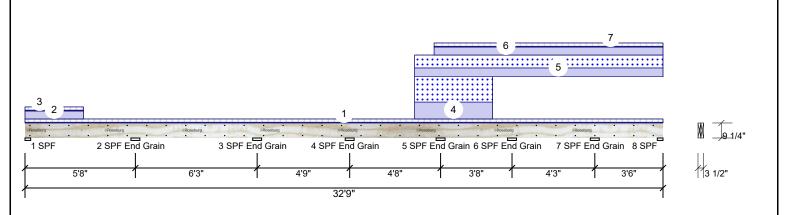
Date: 10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 5 of 33

Project #:

1.750" X 9.250" 2-Ply - PASSED 2.0E Rigidlam LVL **BM2**

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		15-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-0-0		Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-0-0	8-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
4	Part. Uniform	20-0-0 to 24-0-0		Тор	210 PLF	0 PLF	316 PLF	0 PLF	0 PLF	T06
5	Part. Uniform	20-0-0 to 32-9-0		Тор	109 PLF	0 PLF	161 PLF	0 PLF	0 PLF	M03
6	Part. Uniform	21-0-0 to 32-9-0		Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
7	Part. Uniform	21-0-0 to 32-9-0	15-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF					

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

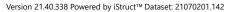
6. For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024







Date: 10/4/2021

Input by: Richard Stokes

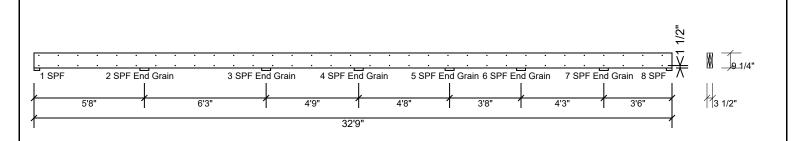
Job Name: 21-6482 BEAM CALCULATIONS

Page 6 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED **BM2**

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

1 3		`	•
Capacity	0.0 %		
Load	0.0 PLF		
Yield Limit per Foot	181.1 PLF		
Yield Limit per Fastener	90.5 lb.		
Yield Mode	IV		
Edge Distance	1 1/2"		
Min. End Distance	3"		
Load Combination			
Duration Factor	1.00		

Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024





Date: 10/4/2021 Input by:

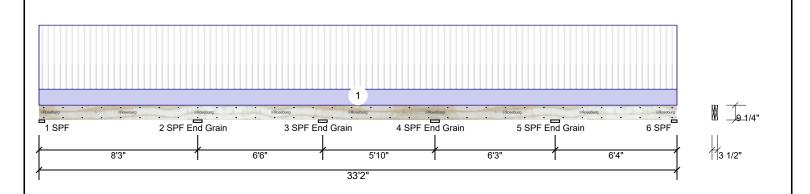
Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 7 of 33

Project #:

2.0E Rigidlam LVL BM3

1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Infor	lember Information				Reactions UNPATTERNED Ib (Uplift)						
Type:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const	
Plies:	2	Design Method:	ASD	1	Vertical	2214	583	0	0	0	
Moisture Conditio	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	5521	1454	0	0	0	
Deflection LL:	480	Load Sharing:	No	3	Vertical	3517	926	0	0	0	
Deflection TL:	240	Deck:	Not Checked	4	Vertical	3811	1004	0	0	0	
Importance:	Normal - II			5	Vertical	4486	1181	0	0	0	
Temperature:	Temp <= 100°F			6	Vertical	1678	442	0	0	0	
				Bea	rings						

 L_LL_L

Analysis Results Comb. Capacity Analysis Actual Location Allowed Case Neg Moment -5327 ft-lb 8'3" 13320 ft-lb 0.400 (40%) D+L LL_L_ Unbraced -5327 ft-lb 8'3" 5328 ft-lb 1.000 D+L LL_L_ (100%)3'7 13/16" 13320 ft-lb 0.355 (36%) D+L Pos Moment 4732 ft-lb L_LL_L 4732 ft-lb 3'7 13/16" 4735 ft-lb 0 999 Unbraced D+L L_LL_L (100%)Shear 3105 lb 7'3" 6259 lb 0.496 (50%) D+L LL L LL Defl inch 0.088 (L/1095) 4' 0.201 (L/480) 0.438 (44%) L L_LL_L

	Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
	1 - SPF	3.500"	Vert	57%	583 / 2368	2952	L_L_L	D+L
	2 - SPF	5.500"	Vert	47%	1454 / 5779	7233	LL_L_	D+L
	End Grain							
	3 - SPF End Grain	5.500"	Vert	36%	926 / 4660	5586 (-217)	_LL_L	D+L(D+L)
	4 - SPF End Grain	5.500"	Vert	37%	1004 / 4647	5651	L_LL_	D+L
	5 - SPF End Grain	5.500"	Vert	39%	1181 / 4812	5993	_L_LL	D+L
┪	6 - SPF	3.500"	Vert	45%	442 / 1896	2338	LLL	D+L

Design Notes

TL Defl inch 0.106 (L/906)

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.

3'11 5/8" 0.401 (L/240) 0.265 (26%) D+L

- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6"
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Tie-down connection required at bearing 3 for uplift 217 lb (Combination D+L, Load Case L__L_).
- 7 Top must be laterally braced at a maximum of 16'3 1/8" o.c.
- 8 Bottom must be laterally braced at a maximum of 14'4 3/8" o.c.
- 9 Lateral slenderness ratio based on single ply width.

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals

 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



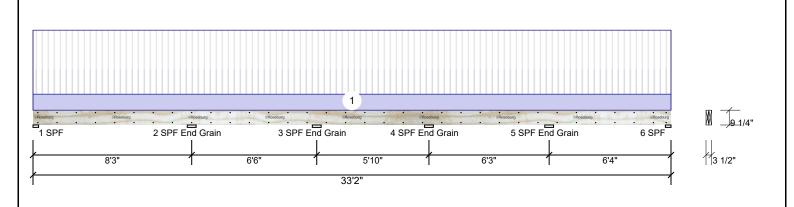
Date: 10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 8 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED **BM3**

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		16-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF					

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

- Handling & Installation
- Handling & Installation

 1. IVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



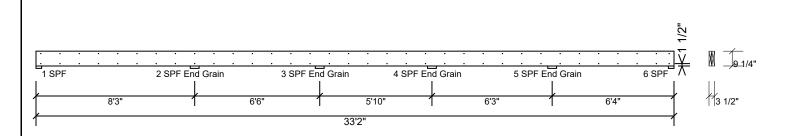
Date: 10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 9 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED **BM3**

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

rasterrain pries asing E	ows or roa box rians (. 120x5) at
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024



Date: 10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 10 of 33

Project #:

Bearing Length

1 - SPF 3.500"

2 - SPF 5.500"

3 - SPF 5.500"

4 - SPF 3.500"

End Grain Dir.

Vert

Vert

Vert

Vert

Cap. React D/L lb

295 / 824

1614 / 2625

1769 / 3145

830 / 1570

39%

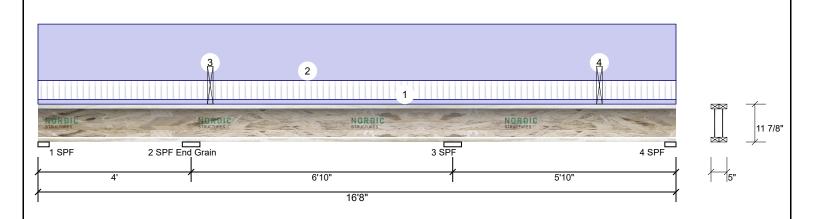
60%

69%

84%

2-Ply - PASSED 1FJ18-2 **NI-40x** 11.875"

Level: Level



Member Inforn	nation			Read	ctions UNP	ATTERNED	b lb (Uplift)
Type:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow
Plies:	2	Design Method:	ASD	1	Vertical	560	295	0
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015	2	Vertical	2469	1614	0
Deflection LL:	480	Load Sharing:	No	3	Vertical	3110	1769	0
Deflection TL:	240	Deck:	Not Checked	4	Vertical	1408	830	0
Importance:	Normal - II			'				-
Temperature:	Temp <= 100°F							
				Bear	rings			

\nal	ysis	Results	
------	------	---------	--

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2655 ft-lb	10'10"	7520 ft-lb	0.353 (35%)	D+L	_LL
Unbraced	-2655 ft-lb	10'10"	2657 ft-lb	0.999 (100%)	D+L	_LLL
Pos Moment	3027 ft-lb	14'8"	7520 ft-lb	0.403 (40%)	D+L	L_L
Unbraced	3027 ft-lb	14'8"	6050 ft-lb	0.500 (50%)	D+L	L_L
Shear	2594 lb	10'10"	2960 lb	0.876 (88%)	D+L	_LL
LL Defl inch	0.031 (L/2158)	13'11 13/16"	0.140 (L/480)	0.222 (22%)	L	L_L
TL Defl inch	0.047 (L/1420)	14' 9/16"	0.280 (L/240)	0.169 (17%)	D+L	L_L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange must be laterally braced at bearings.

6 Bottom	flange must be laterally brace	ed at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		10-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Point	4-6-0		Тор	351 lb	160 lb	0 lb	0 lb	0 lb	BM12 Brg 2
	Bearing Length	0-3-0								
4	Point	14-8-0		Тор	491 lb	720 lb	0 lb	0 lb	0 lb	BM11 Brg 2
	Bearing Length	0-3-0								

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and

Engineered Wood Products

- Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.
- Handling & Installation
- Handling & Installation

 I. Engineered wood products must not be cut or drilled.
 Damaged products shall not be used.

 2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

 3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

 4. For flat roof, provide proper drainage to prevent ponding.

- ponding.

 5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca

Manufacturer Info

APA PR-L274C

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Wind

0

0

0

0

Total Ld. Case

1119 L L

4240 LL_

4914 _LL

2400 L_L

Const

0

0

0

0

Ld. Comb.

D+L

D+L

D+I

D+L

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



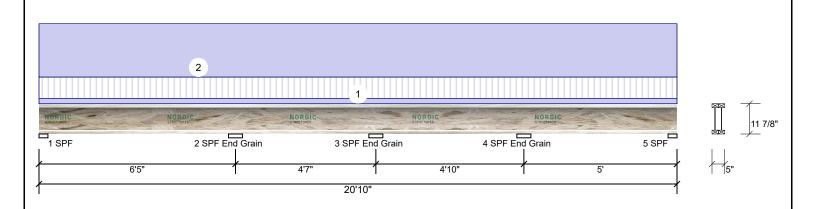
Date: 10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 11 of 33

Project #:

2-Ply - PASSED 1FJ22-2 NI-40x 11.875"

Level: Level



Member Inforn	lember Information					Reactions UNPATTERNED lb (Uplift)							
Type:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const			
Plies:	2	Design Method:	ASD	1	Vertical	115	315	0	0	0			
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015	2	Vertical	243	667	0	0	0			
Deflection LL:	480	Load Sharing:	No	3	Vertical	179	491	0	0	0			
Deflection TL:	240	Deck:	Not Checked	4	Vertical	210	576	0	0	0			
Importance:	Normal - II			5	Vertical	88	242	0	0	0			
Temperature:	Temp <= 100°F			-	•								
				Bea	rings								
				Bea	aring Length	Dir. C	ap. React D/L lb	Total	Ld. Case	Ld. Comb.			

Analysis	Results
----------	---------

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-427 ft-lb	6'5"	7520 ft-lb	0.057 (6%)	D+L	LL_L
Unbraced	-427 ft-lb	6'5"	1196 ft-lb	0.357 (36%)	D+L	LL_L
Pos Moment	534 ft-lb	2'10 13/16"	7520 ft-lb	0.071 (7%)	D+L	L_L_
Unbraced	534 ft-lb	2'10 13/16"	6373 ft-lb	0.084 (8%)	D+L	L_L_
Shear	533 lb	6'5"	2960 lb	0.180 (18%)	D+L	LL_L
LL Defl inch	0.003 (L/26375)	3'3 1/16"	0.155 (L/480)	0.018 (2%)	L	L_L_
TL Defl inch	0.010 (L/7381)	3'2 11/16"	0.309 (L/240)	0.033 (3%)	D+L	L_L_

Bearings	S						
Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	15%	315 / 120	435	L_L_	D+L
2 - SPF End Grain	5.500"	Vert	13%	667 / 251	919	LL_L	D+L
3 - SPF End Grain	5.500"	Vert	10%	491 / 205	696	_LL_	D+L

576 / 217

242 / 96

11%

12%

Vert

Vert

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange must be laterally braced at bearings.
- 6 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and loads.

Engineered Wood Products

Notes

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

- Handling & Installation

 I. Engineered wood products must not be cut or drilled.
 Damaged products shall not be used.

 2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

 3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

 4. For flat roof, provide proper drainage to prevent ponding.
- ponding.

 5. Design assumes top flange to be laterally restrained

This design is valid until 5/24/2024

by attached sheathing or as specified in engineering notes. Manufacturer Info

4 - SPF 5.500"

End Grain 5 - SPF 3.500"

> Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca

APA PR-L274C

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

D+L

D+L

794 L_LL

339 _L_L

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



Date: 10/4/2021

Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Page 12 of 33

Project #:

2-Ply - PASSED 1FJ38-2 11.875" NI-40x

Level: Level

Dir.

Vert

Vert

Vert

Vert

Vert

Vert

Bearing Length 1 - SPF 3.500"

End Grain 2 - SPF 5.500"

End Grain 3 - SPF 5.500"

End Grain 4 - SPF 3.500"

End Grain 5 - SPF 3.500"

End

Grain

6 - SPF 3.500"

Cap. React D/L lb

1237 / 216

2480 / 487

408 / 400

945 / 532

1366 / 862

445 / 150

51%

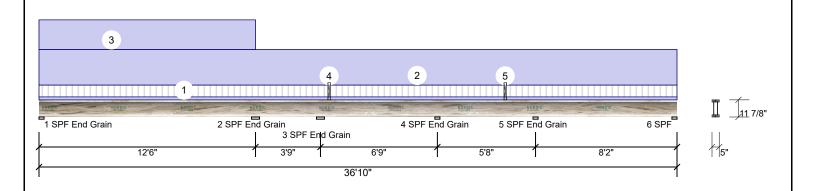
42%

11%

25%

37%

21%



Member Infor	mation			Rea	ctions UNPA	ATTERNED	lb (Uplift)		
Туре:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const
Plies:	2	Design Method:	ASD	1	Vertical	214	1237	0	0	0
Moisture Conditio	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	455	2480	0	0	0
Deflection LL:	480	Load Sharing:	No	3	Vertical	235	408	0	0	0
Deflection TL:	240	Deck:	Not Checked	4	Vertical	493	945	0	0	0
Importance:	Normal - II			5	Vertical	842	1366	0	0	0
Temperature:	Temp <= 100°F			6	Vertical	113	445	0	0	0
				Bea	rings	•				

Analysis Results

Analysis Actual Location Allowed Capacity Comb. Ca	se
Neg Moment -3284 ft-lb 12'6" 7520 ft-lb 0.437 (44%) D+L LLL	_L
Unbraced -3284 ft-lb 12'6" 3905 ft-lb 0.841 (84%) D+L LLL	_L
Pos Moment 3581 ft-lb 5'4 9/16" 7520 ft-lb 0.476 (48%) D+L L_	L_
Unbraced 3581 ft-lb 5'4 9/16" 3905 ft-lb 0.917 (92%) D+L L_	L_
Shear 1924 lb 12'6" 2960 lb 0.650 (65%) D+L LLL	_L
LL Defl inch 0.011 (L/5992) 26'11" 0.142 (L/480) 0.080 (8%) L LL_	L_
TL Defl inch 0.154 (L/954) 5'11 13/16" 0.614 (L/240) 0.252 (25%) D+L L_	L_

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange must be laterally braced at a maximum of 10'5" o.c.

6 Bottom flange	must be laterally brace	ed at a maximum	of 10'5" o.c.								
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF		
2	Uniform			Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF		
3	Part. Uniform	0-0-0 to 12-6-0		Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF		
4	Point	16-9-0		Тор	351 lb	160 lb	0 lb	0 lb	0 lb	BM12 Brg 2	
	Bearing Length	0-3-0									

Continued on page 2...

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

- Handling & Installation
- Handling & Installation

 I. Engineered wood products must not be cut or drilled.
 Damaged products shall not be used.

 2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

 3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

 4. For flat roof, provide proper drainage to prevent ponding.

- ponding.

 5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering

This design is valid until 5/24/2024

Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Total Ld. Case

1453 L L

2966 LL_L_

808 _LL_L

1477 __LL_

2228 LL_LL

__L_L

594

Ld. Comb.

D+L

D+L

D+I

D+L

D+I

D+L



Date: 10/4/2021

Input by: Richard Stokes

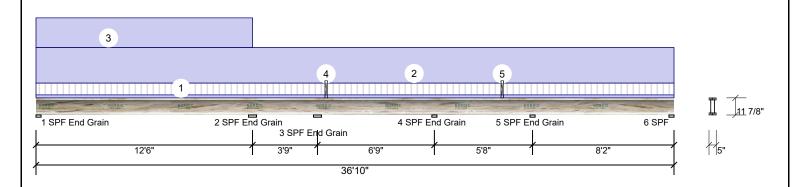
Job Name: 21-6482 BEAM CALCULATIONS

Page 13 of 33

Project #:

2-Ply - PASSED 11.875" 1FJ38-2 NI-40x

Level: Level



.Continued from page 1

Dead 0.9 ID Load Type Location Trib Width Side Live 1 Snow 1.15 Wind 1.6 Const. 1.25 Comments 5 Point 26-11-0 Тор 491 lb 720 lb 0 lb 0 lb 0 lb BM11 Brg 2 Bearing Length 0-3-0

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and loads.

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

Handling & Installation

1. Engineered wood products must not be cut or drilled.
Damaged products shall not be used.

2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

4. For flat roof, provide proper drainage to prevent ponding.

ponding.

5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



10/4/2021 Date:

Richard Stokes Input by:

Job Name: 21-6482 BEAM CALCULATIONS

Page 14 of 33

0

0

0

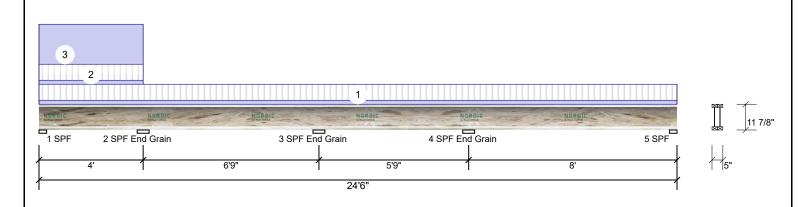
0

0

Project #

2-Ply - PASSED 11.875" 1FJ26-2 NI-40x

Level: Level



Member Information Reactions UNPATTERNED lb (Uplift) Wind Type: Application: Floor Brg Direction Live Dead Snow Const Plies 2 Design Method: ASD 853 Vertical 412 n 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 Vertical 1069 476 0 0 Deflection LL: 480 Load Sharing: No 3 Vertical 209 43 0 0 Deflection TL: 240 Deck: Not Checked Vertical 4 309 78 0 0 Importance: Normal - II Vertical 35 0 5 140 0 Temperature: Temp <= 100°F Bearings

Analysis Results Comb. Analysis Actual Location Allowed Capacity Case Neg Moment -419 ft-lb 4' 7520 ft-lb 0.056 (6%) D+L LL_L Unbraced -419 ft-lb 4' 868 ft-lb 0.482 (48%) D+L LL L Pos Moment 1003 ft-lb 1'11 13/16" 7520 ft-lb 0.133 (13%) D+L L_L_ Unbraced 1003 ft-lb 1'11 13/16" 5510 ft-lb 0.182 (18%) D+L L_L 1337 lb Shear 4' 2960 lb 0.452 (45%) D+L LL_L LL Defl inch 0.008 (L/5410) 2'1 3/16" 0.094 (L/480) 0.089 (9%) L L_L_

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.500" Vert 45% 412 / 878 1291 L L D+I 476 / 1081 2 - SPF 5.500" Vert 22% 1557 LL_L D+I End Grain 43 / 275 319 (-24) _LL_ 3 - SPF 5.500' 5% D+L(D+L) Vert End Grain 4 - SPF 5.500" D+L Vert 6% 78 / 326 405 L_LL End Grain 5 - SPF 3.500" 6% 35 / 147 182 _L_L D+L Vert

Design Notes

TL Defl inch 0.012 (L/3678)

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.

2'1 3/16" 0.189 (L/240) 0.065 (7%) D+L

- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Tie-down connection required at bearing 3 for uplift 24 lb (Combination D+L, Load Case L L).
- 6 Top flange must be laterally braced at bearings.
- 7 Bottom flange must be laterally braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-0-0	10-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 4-0-0		Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	

 L_L

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and

Engineered Wood Products

Notes

- Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.
- Handling & Installation
- Rantoning & Installation
 Insplaned wood products must not be cut or drilled. Damaged products shall not be used.
 Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.
 Provide lateral support at bearing points to prevent lateral displacement and rotation.
 For flat roof, provide proper drainage to prevent ponding.

5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering

This design is valid until 5/24/2024

Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418

Manufacturer Info

www.nordic.ca APA PR-L274C Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



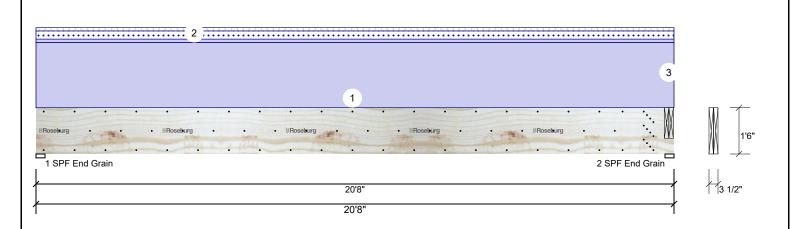
10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 15 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 18.000" 2-Ply - PASSED BM8

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Type: Floor Brg Direction Live Dead Plies: 2 Design Method: ASD 103 2342 Vertical 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 Vertical 867 3210 Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temp <= 100°F Temperature: **Bearings** Bearing Length Dir. Cap. React D/L lb 1 - SPF 3.500" Vert 28% 2342 / 271 End Grain

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11569 ft-lb	10'4"	41771 ft-lb	0.277 (28%)	D	Uniform
Unbraced	12909 ft-lb	10'4"	12952 ft-lb	0.997 (100%)	D+0.75(L+S)	L
Shear	1961 lb	1'9 1/2"	10962 lb	0.179 (18%)	D	Uniform
LL Defl inch	0.029 (L/8376)	10'4 1/16"	0.505 (L/480)	0.057 (6%)	0.75(L+S)	L
TL Defl inch	0.279 (L/869)	10'4 1/16"	1.010 (L/240)	0.276 (28%)	D+0.75(L+S)	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at a maximum of 10'5 1/2" o.c.
- 8 Bottom must be laterally braced at end bearings.

9 Lateral slende	erness ratio based on single	ply width.								
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
2	Uniform		1-0-0	Тор	10 PSF	10 PSF	25 PSF	0 PSF	0 PSF	
3	Point	20-6-0		Near Face	868 lb	763 lb	0 lb	0 lb	0 lb	BM14 Brg 1
	Self Weight				17 PLF					

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

44%

Vert

2 - SPF 3.500"

End Grain 3210 / 867

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Wind

Total Ld. Case

2613 L

4076 L

0

0

Const

Ld. Comb. D+0.75(L+S)

D+L

0

0

Snow

258

258



10/4/2021 Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Page 16 of 33

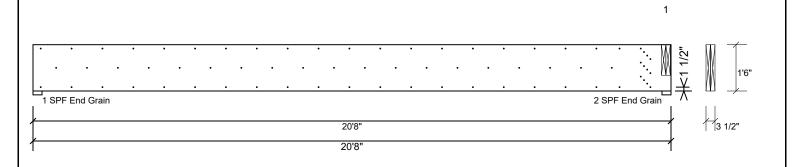
Project #:

2.0E Rigidlam LVL BM8

1.750" X 18.000"

2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6".

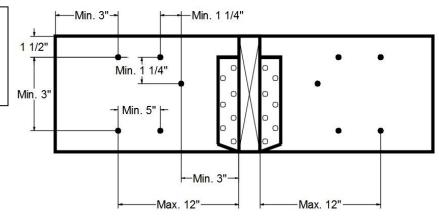
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 20-6-0 with a minimum of (12) – 10d Box nails (.128x3") in the pattern shown.

partern sile min		
Capacity Load	75.1 %	
Load	815.7lb.	
Total Yield Limit	1086.3 lb.	
Cg	0.9998	
Yield Limit per Fastener	90.5 lb.	
Yield Mode	IV	
Load Combination	D+L	
Duration Factor	1.00	

Min/Max fastener distances for Concentrated Side Loads



Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005

Manufacturer Info

www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217





Member Information

Client: Project: Address:

10/4/2021 Date: Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Page 17 of 33

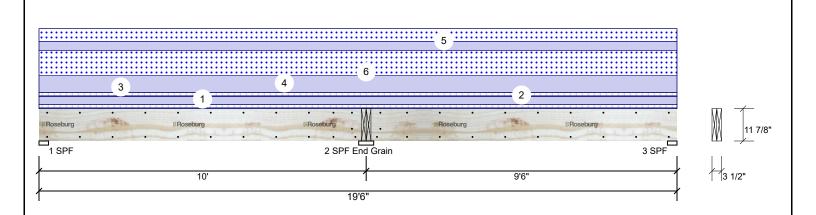
Project #:

2.0E Rigidlam LVL BM9

1.750" X 11.875"

2-Ply - PASSED

Level: Level



Application: Type: Plies 2 Design Method: ASD Moisture Condition: Dry **Building Code: IBC/IRC 2015** Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F

Reactions UNPATTERNED lb (Uplift)												
Brg	Direction	Live	Dead	Snow	Wind	Const						
1	Vertical	1423	2055	1885	0	0						
2	Vertical	4533	6938	5680	0	0						
3	Vertical	1310	1893	1736	0	0						

Analysis Results Analysis Actual Location Allowed Comb. Case Capacity 10' 24470 ft-lb 0.533 (53%) D+0.75(L+S) LL Neg Moment -13031 ft-lb Unbraced -13031 ft-lb 10' 13073 ft-lb 0.997 D+0.75(L+S) LL (100%)Pos Moment 8876 ft-lb 4'1 15/16" 24470 ft-lb 0.363 (36%) D+0.75(L+S) L_ 0.998 8876 ft-lb 4'1 15/16" 8894 ft-lb D+0.75(L+S) L_ Unbraced (100%)Shear 5553 lb 8'9 3/8" 9241 lb 0.601 (60%) D+0.75(L+S) LL LL Defl inch 0.082 (L/1430) 4'8 7/8" 0.244 (L/480) 0.336 (34%) 0.75(L+S) L_ TL Defl inch 0.130 (L/901) 4'7 5/16" 0.489 (L/240) 0.266 (27%) D+0.75(L+S) L_

	Bearings													
ſ	Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.						
l	1 - SPF	3.500"	Vert	92%	2055 / 2722	4777	L_	D+0.75(L+S)						
	2 - SPF End Grain	5.500"	Vert	95%	6938 / 7660	14598	LL	D+0.75(L+S)						
l	3 - SPF	3.500"	Vert	86%	1893 / 2581	4474	_L	D+0.75(L+S)						

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6"
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at a maximum of 10'8 1/2" o.c.
- 8 Bottom must be laterally braced at a maximum of 6'6 3/4" o.c.
- 9 Lateral slenderness ratio based on single ply width.

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

Damaged Beams must not be used

Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005

Manufacturer Info

www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss 733 River Park Drive, Virginia 24540

434-793-0217



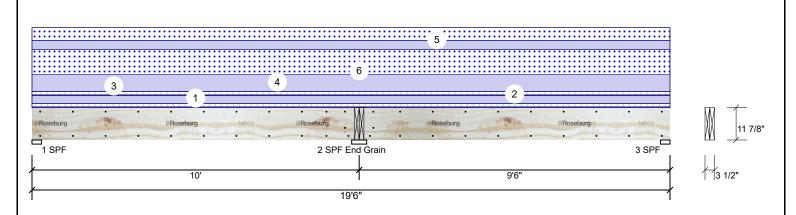
Date: 10/4/2021 Input by:

Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 18 of 33

Project #:

2.0E Rigidlam LVL 2-Ply - PASSED 1.750" X 11.875" **BM9**

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR //
2	Uniform			Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
3	Uniform		8-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR PERP.
4	Uniform			Тор	210 PLF	0 PLF	316 PLF	0 PLF	0 PLF	T06
5	Uniform			Тор	109 PLF	0 PLF	161 PLF	0 PLF	0 PLF	M03
6	Point	10-0-0		Near Face	746 lb	247 lb	0 lb	0 lb	0 lb	BM10 Brg 1
	Self Weight				11 PLF					

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



10/4/2021 Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Page 19 of 33

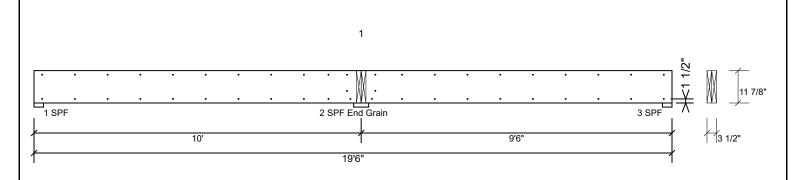
Project #:

2.0E Rigidlam LVL **BM9**

1.750" X 11.875"

2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6".

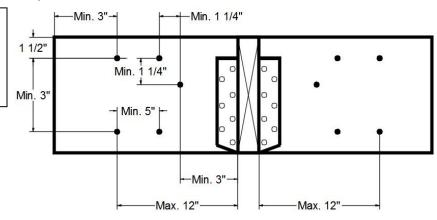
Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	181.1 PLF	
Yield Limit per Fastener	90.5 lb.	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination		
Duration Factor	1.00	

Concentrated Load

Fasten at concentrated side load at 10-0-0 with a minimum of (6) - 10d Box nails (.128x3") in the pattern shown.

P		
Capacity Load	91.4 %	
Load	496.4lb.	
Total Yield Limit	543.3 lb.	
Cg	1.0000	
Yield Limit per Fastener	90.5 lb.	
Yield Mode	IV	
Load Combination	D+L	
Duration Factor	1 00	

Min/Max fastener distances for Concentrated Side Loads



Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used

- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



10/4/2021 Input by: Richard Stokes

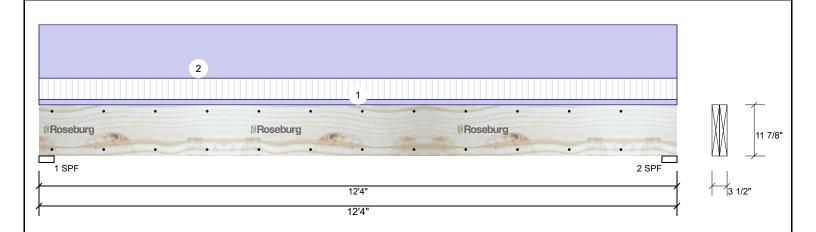
Job Name: 21-6482 BEAM CALCULATIONS

Page 20 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED **BM10**

Level: Level



Member Infor	mation			Read	Reactions UNPATTERNED Ib (Uplift)								
Type:	Girder	Application:	Floor	Brg	Direction	Live		Dead	Snow	Wind	Const		
Plies:	2	Design Method:	ASD	1	Vertical	247		746	0	0	0		
Moisture Conditio	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	247		746	0	0	0		
Deflection LL:	480	Load Sharing:	No										
Deflection TL:	240	Deck:	Not Checked										
Importance:	Normal - II												
Temperature:	Temp <= 100°F			-									
				Bear	rings								
				Bea	aring Length	Dir.	Cap. R	eact D/L lb	Total	Ld. Case	Ld. Comb.		
				1 -	SPF 3.500"	Vert	19%	746 / 247	993	L	D+L		
				2 -	SPF 3.500"	Vert	19%	746 / 247	993	L	D+L		

Analysis Results

1	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2837 ft-lb	6'2"	21278 ft-lb	0.133 (13%)	D+L	L
	Unbraced	2837 ft-lb	6'2"	8120 ft-lb	0.349 (35%)	D+L	L
	Shear	797 lb	1'3 3/8"	8035 lb	0.099 (10%)	D+L	L
	LL Defl inch	0.018 (L/7778)	6'2"	0.297 (L/480)	0.062 (6%)	L	L
	TL Defl inch	0.074 (L/1933)	6'2"	0.594 (L/240)	0.124 (12%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Тор	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				11 PLF					

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
 2 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

isDesign

Client: Project: Address: Date: 10/4/2021 Input by: Richard Stokes

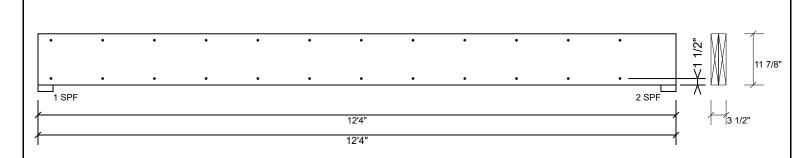
Job Name: 21-6482 BEAM CALCULATIONS

Page 21 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED **BM10**

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

		,	,
Capacity	0.0 %		
Load	0.0 PLF		
Yield Limit per Foot	181.1 PLF		
Yield Limit per Fastener	90.5 lb.		
Yield Mode	IV		
Edge Distance	1 1/2"		
Min. End Distance	3"		
Load Combination			
Duration Factor	1.00		

Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142





Project: Address:

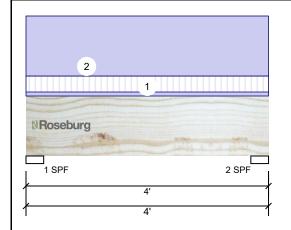
10/4/2021 Input by:

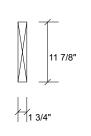
Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS

Project #:

1.750" X 11.875" - PASSED 2.0E Rigidlam LVL **BM11**

_evel: Level





Page 22 of 33

Member Infor	mation			Read	tions UNP	ATTERN	IED lb (U	lplift)			
Туре:	Girder	Application:	Floor	Brg	Direction	Live	De	ad	Snow	Wind	Const
Plies:	1	Design Method:	ASD	1	Vertical	720	4	91	0	0	0
Moisture Conditio	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	720	4	91	0	0	0
Deflection LL:	480	Load Sharing:	No								
Deflection TL:	240	Deck:	Not Checked								
Importance:	Normal - II										
Temperature:	Temp <= 100°F										
				Bea	rings						
				Bea	aring Length	Dir.	Cap. Rea	act D/L lb	Total	Ld. Case	Ld. Comb.
				1 -	SPF 3.500"	Vert	47%	491 / 720	1211	L	D+L
				2 -	SPF 3.500"	Vert	47%	491 / 720	1211	L	D+L

Analysis Results

Actual I	Location	Allowed	Capacity	Comb.	Case
949 ft-lb	2'	10639 ft-lb	0.089 (9%)	D+L	L
949 ft-lb	2'	9365 ft-lb	0.101 (10%)	D+L	L
l41 lb	2'8 5/8"	4018 lb	0.110 (11%)	D+L	L
).003 L/16288)	2' 1/16"	0.089 (L/480)	0.029 (3%)	L	L
0.004 (L/9684)	2' 1/16"	0.177 (L/240)	0.025 (2%)	D+L	L
) 2) 2 2 L	49 ft-lib 49 ft-lib 41 lib 003 //16288)	49 ft-lb 2' 49 ft-lb 2' 41 lb 2'8 5/8" 003 2' 1/16" /16288)	49 ft-lb 2' 10639 ft-lb 49 ft-lb 2' 9365 ft-lb 41 lb 2'8 5/8" 4018 lb 003 2' 1/16" 0.089 (L/480)	49 ft-lb 2' 10639 ft-lb 0.089 (9%) 49 ft-lb 2' 9365 ft-lb 0.101 (10%) 41 lb 2'8 5/8" 4018 lb 0.110 (11%) 003 2' 1/16" 0.089 (L/480) 0.029 (3%)	49 ft-lb 2' 10639 ft-lb 0.089 (9%) D+L 49 ft-lb 2' 9365 ft-lb 0.101 (10%) D+L 41 lb 2'8 5/8" 4018 lb 0.110 (11%) D+L 003 2' 1/16" 0.089 (L/480) 0.029 (3%) L //16288)

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top must be laterally braced at end bearings.
- 4 Bottom must be laterally braced at end bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		9-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Тор	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF					

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



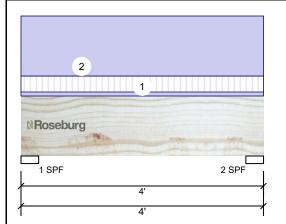
Project: Address: 10/4/2021

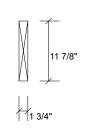
Input by: Richard Stokes

_evel: Level

Job Name: 21-6482 BEAM CALCULATIONS

1.750" X 11.875" - PASSED 2.0E Rigidlam LVL **BM12**





Page 23 of 33

Member Infor	rmation			Rea	ctions UNP	ATTER	NED I	(Uplift)			
Type:	Girder	Application:	Floor	Brg	Direction	Live	;	Dead	Snow	Wind	Const
Plies:	1	Design Method:	ASD	1	Vertical	160)	351	0	0	0
Moisture Condition	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	160)	351	0	0	0
Deflection LL:	480	Load Sharing:	No								
Deflection TL:	240	Deck:	Not Checked								
Importance:	Normal - II										
Temperature:	Temp <= 100°F										
				Bea	rings						
				Bea	aring Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 -	SPF 3.500"	Vert	20%	351 / 160	511	L	D+L
				2 -	SPF 3.500"	Vert	20%	351 / 160	511	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	401 ft-lb	2'	10639 ft-lb	0.038 (4%)	D+L	L
Unbraced	401 ft-lb	2'	9365 ft-lb	0.043 (4%)	D+L	L
Shear	189 lb	1'3 3/8"	4018 lb	0.047 (5%)	D+L	L
LL Defl inch	0.001 (L/73295)	2' 1/16"	0.089 (L/480)	0.007 (1%)	L	L
TL Defl inch	0.002 (L/22951)	2' 1/16"	0.177 (L/240)	0.010 (1%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top must be laterally braced at end bearings.
- 4 Bottom must be laterally braced at end bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		2-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Тор	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF					

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005

www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



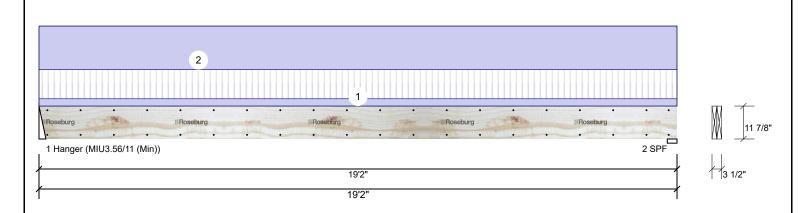
10/4/2021

Input by: Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 24 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED **BM14**

Level: Level



Member Info	rmation			Reactions UNPATTERNED Ib (Uplift)							
Type:	Girder	Application:	Floor	Brg	Direction	Live	;	Dead	Snow	Wind	Const
Plies:	2	Design Method:	ASD	1	Vertical	763	3	868	0	0	0
Moisture Condition	on: Dry	Building Code:	IBC/IRC 2015	2	Vertical	770)	876	0	0	0
Deflection LL:	480	Load Sharing:	No								
Deflection TL:	240	Deck:	Not Checked								
Importance:	Normal - II										
Temperature:	Temp <= 100°F			<u> </u>							
				Bea	rings						
				Bea	aring Lengt	h Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 -	2.500"	Vert	25%	868 / 763	1631	L	D+L
				Hai	nger						
Analysis Resu	lts			2 -	SPF 3.500"	Vert	32%	876 / 770	1646	L	D+L

Analysis Actual Location Allowed Capacity Comb	o. Case
Moment 7547 ft-lb 9'6 1/2" 21278 ft-lb 0.355 (35%) D+L	L
Unbraced 7547 ft-lb 9'6 1/2" 7550 ft-lb 1.000 D+L (100%)	L
Shear 1437 lb 17'10 5/8" 8035 lb 0.179 (18%) D+L	L
LL Defl inch 0.230 (L/981) 9'6 9/16" 0.470 (L/480) 0.489 (49%) L	L
TL Defl inch 0.491 (L/459) 9'6 9/16" 0.940 (L/240) 0.523 (52%) D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at a maximum of 12'11 1/2" o.c.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width

5 Lateral Stellue	siliess ratio based oil siligie	pry wiatri.									
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform		2-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF		
2	Uniform			Тор	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF		
	Self Weight				11 PLF						

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
 2 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES:

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

ESR-1210 This design is valid until 5/24/2024

isDesign

Client: Project: Address:

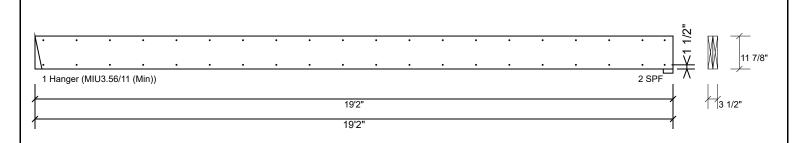
10/4/2021 Input by:

Richard Stokes Job Name: 21-6482 BEAM CALCULATIONS Page 25 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED **BM14**

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

		,	,
Capacity	0.0 %		
Load	0.0 PLF		
Yield Limit per Foot	181.1 PLF		
Yield Limit per Fastener	90.5 lb.		
Yield Mode	IV		
Edge Distance	1 1/2"		
Min. End Distance	3"		
Load Combination			
Duration Factor	1.00		

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

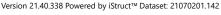
Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024









10/4/2021 Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Page 26 of 33

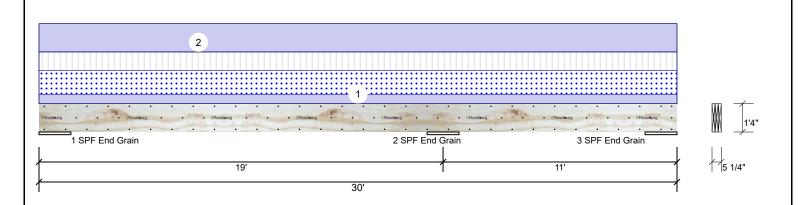
Project #:

BM15 2.0E Rigidlam LVL

1.750" X 16.000"

3-Ply - PASSED

Level: Level



Member Infor	mation		
Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition	: Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Analysis	Results
----------	---------

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-16734 ft-lb	19'	66764 ft-lb	0.251 (25%)	D+0.75(L+S)	LL
Unbraced	-16734 ft-lb	19'	16756 ft-lb	0.999 (100%)	D+0.75(L+S)	LL
Pos Moment	15155 ft-lb	8'8 3/16"	66764 ft-lb	0.227 (23%)	D+0.75(L+S)	L_
Unbraced	15155 ft-lb	8'8 3/16"	15169 ft-lb	0.999 (100%)	D+0.75(L+S)	L_
Shear	4848 lb	16'11"	18676 lb	0.260 (26%)	D+0.75(L+S)	LL
LL Defl inch	0.145 (L/1453)	9'5 3/4"	0.439 (L/480)	0.330 (33%)	0.75(L+S)	L_
TL Defl inch	0.202 (L/1042)	9'5 3/8"	0.878 (L/240)	0.230 (23%)	D+0.75(L+S)	L_

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 12'7 5/16" o.c.
- 7 Bottom must be laterally braced at a maximum of 11'1 7/8" o.c.
- 8 Lateral slenderness ratio based on single ply width.

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2056	1475	2570	0	0
2	Vertical	4379	3141	5474	0	0
3	Vertical	765	549	956	0	0

Bearings

ı								
I	Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
	1 - SPF End Grain	18.000"	Vert	7%	1475 / 3537	5012	L_	D+0.75(L+S)
	2 - SPF End Grain	18.000"	Vert	15%	3141 / 7389	10531	LL	D+0.75(L+S)
	3 - SPF End Grain	18.000"	Vert	4%	549 / 2054	2603	_L	D+0.75(L+S)

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
 2 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

This design is valid until 5/24/2024



Location

Trib Width

Side

10/4/2021 Input by: Richard Stokes

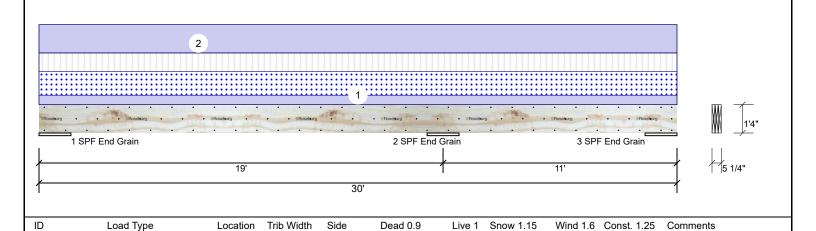
Job Name: 21-6482 BEAM CALCULATIONS

Page 27 of 33

Project #:

BM15 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



Dead 0.9

Live 1

Snow 1.15

Wind 1.6 Const. 1.25

Comments

1	Uniform	12-0-0	Тор	10 PSF	20 PSF	25 PSF	0 PSF	0 PSF
2	Uniform		Тор	30 PLF	0 PLF	0 PLF	0 PLF	0 PLF
	Self Weight			22 PLF				

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. IVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



10/4/2021 Input by: Richard Stokes

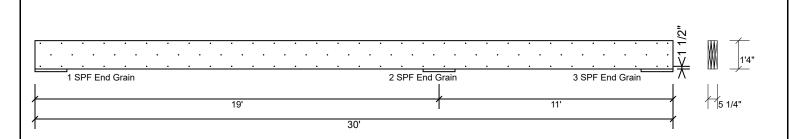
Job Name: 21-6482 BEAM CALCULATIONS

Page 28 of 33

Project #:

2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED **BM15**

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed

Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	271.6 PLF	
Yield Limit per Fastener	90.5 lb.	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination		
Duration Factor	1 00	

Notes

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information
 requirements, multi-ply
 fastening details, beam strength values, and code
 approvals
 Damaged Beams must not be used
- Danaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217



Date: 10/4/2021

Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Page 29 of 33

Const

0

0

0

0

Ld. Comb.

D+I

D+I

D+L

D+L

Project #:

2 - SPF 3.500"

3 - SPF 3.500"

4 - SPF 3.500"

Vert

Vert

Vert

40%

39%

30%

226 / 961

224 / 956

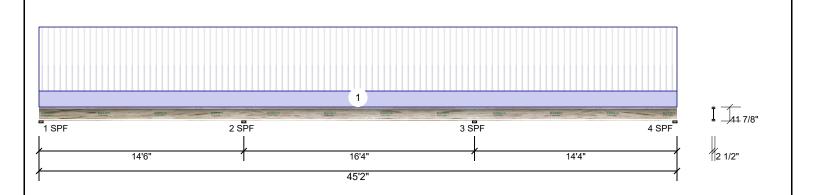
76 / 355

1187 LL_

431 L_L

1180 _LL

NI-40x 1FJ46 11.875" - PASSED Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Snow Wind Type: Floor Brg Direction Live Dead Spacing: 16" o.c. Design Method: ASD 307 77 0 Vertical n 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 Vertical 903 226 0 0 Deflection LL: 480 Load Sharing: No 3 Vertical 896 224 0 0 Deflection TL: 240 Deck: 23/32 APA Rated Sturd-Vertical 0 4 303 76 0 I-FloorOSB Nailed and Importance: Normal - II Glued Temp <= 100°F Temperature: **Bearings** Bearing Length Dir. Cap. React D/L lb Total Ld. Case 1 - SPF 3.500" Vert 30% 77 / 358 435 L L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1686 ft-lb	14'6"	3760 ft-lb	0.448 (45%)	D+L	LL_
Unbraced	-1686 ft-lb	14'6"	1703 ft-lb	0.990 (99%)	D+L	LL_
Pos Moment	1319 ft-lb	6'6 1/4"	3760 ft-lb	0.351 (35%)	D+L	L_L
Shear	594 lb	14'6"	1480 lb	0.401 (40%)	D+L	LL_
LL Defl inch	0.124 (L/1583)	22'7 15/16"	0.408 (L/480)	0.303 (30%)	L	_L_
TL Defl inch	0.126 (L/1356)	7' 3/4"	0.714 (L/240)	0.177 (18%)	D+L	L_L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Bottom flange must be laterally braced at a maximum of 5'8" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

- Handling & Installation

 I. Engineered wood products must not be cut or drilled.
 Damaged products shall not be used.

 2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

 3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

 4. For flat roof, provide proper drainage to prevent ponding.
- ponding.

 5. Design assumes top flange to be laterally restrained

This design is valid until 5/24/2024

by attached sheathing or as specified in engineering

Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Manufacturer Info

Riverside Roof Truss 733 River Park Drive, Virginia

24540 434-793-0217



Date: 10/4/2021

Input by: Richard Stokes

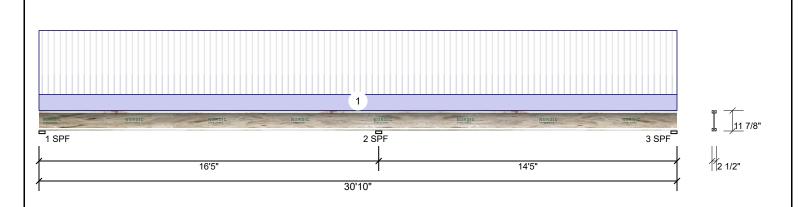
Job Name: 21-6482 BEAM CALCULATIONS

Page 30 of 33

Project #:

11.875" - PASSED **1FJ32** NI-40x

Level: Level



Member Info	rmation			Reactions UNPATTERNED Ib (Uplift)							
Type:	Joist	Application:	Floor	Brg	Direction	Live	[Dead	Snow	Wind	Const
Spacing:	16" o.c.	Design Method:	ASD	1	Vertical	352		88	0	0	0
Moisture Condition	on: Dry	Building Code:	IBC/IRC 2015	2	Vertical	1006		251	0	0	0
Deflection LL:	480	Load Sharing:	No	3	Vertical	286		72	0	0	0
Deflection TL:	240	Deck:	23/32 APA Rated Sturd-								
Importance:	Normal - II		I-FloorOSB Nailed and Glued								
Temperature:	Temp <= 100°F		Glueu								
				Bea	rings						
				Bea	aring Length	Dir.	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 -	SPF 3.500"	Vert	33%	88 / 389	477	L_	D+L
				2 -	SPF 3.500"	Vert	42%	252 / 1007	1259	LL	D+L
Analysis Resu	lts			3 -	SPF 3.500"	Vert	29%	71 / 348	420	_L	D+L
Analysis A	etual Location	Allowed Canad	rity Comb Case								

Anaiysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1866 ft-lb	16'5"	3760 ft-lb	0.496 (50%)	D+L	LL
Unbraced	-1866 ft-lb	16'5"	1887 ft-lb	0.989 (99%)	D+L	LL
Pos Moment	1597 ft-lb	7'1 13/16"	3760 ft-lb	0.425 (42%)	D+L	L_
Shear	655 lb	16'5"	1480 lb	0.442 (44%)	D+L	LL
LL Defl inch	0.156 (L/1248)	7'11 3/16"	0.405 (L/480)	0.385 (38%)	L	L_
TL Defl inch	0.185 (L/1048)	7'10 3/8"	0.809 (L/240)	0.229 (23%)	D+L	L_
	Neg Moment Unbraced Pos Moment Shear LL Defl inch	Neg Moment -1866 ft-lb Unbraced -1866 ft-lb Pos Moment 1597 ft-lb	Neg Moment -1866 ft-lb 16'5" Unbraced -1866 ft-lb 16'5" Pos Moment 1597 ft-lb 7'1 13/16" Shear 655 lb 16'5" LL Defl inch 0.156 (L/1248) 7'11 3/16"	Neg Moment -1866 ft-lb 16'5" 3760 ft-lb Unbraced -1866 ft-lb 16'5" 1887 ft-lb Pos Moment 1597 ft-lb 7'1 13/16" 3760 ft-lb Shear 655 lb 16'5" 1480 lb LL Defl inch 0.156 (L/1248) 7'11 3/16" 0.405 (L/480)	Neg Moment -1866 ft-lb 16'5" 3760 ft-lb 0.496 (50%) Unbraced -1866 ft-lb 16'5" 1887 ft-lb 0.989 (99%) Pos Moment 1597 ft-lb 7'1 13/16" 3760 ft-lb 0.425 (42%) Shear 655 lb 16'5" 1480 lb 0.442 (44%) LL Defl inch 0.156 (L/1248) 7'11 3/16" 0.405 (L/480) 0.385 (38%)	Neg Moment -1866 ft-lb 16'5" 3760 ft-lb 0.496 (50%) D+L Unbraced -1866 ft-lb 16'5" 1887 ft-lb 0.989 (99%) D+L Pos Moment 1597 ft-lb 7'1 13/16" 3760 ft-lb 0.425 (42%) D+L Shear 655 lb 16'5" 1480 lb 0.442 (44%) D+L LL Defl inch 0.156 (L/1248) 7'11 3/16" 0.405 (L/480) 0.385 (38%) L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Bottom flange must be laterally braced at a maximum of 5'4" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and 2. loads.

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

- Handling & Installation
 Engineered wood products must not be cut or drilled. Damaged products shall not be used.
 Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.
 Provide lateral support at bearing points to prevent lateral displacement and rotation.
 For flat roof, provide proper drainage to prevent ponding.

ponding.

5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



Date: 10/4/2021

Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

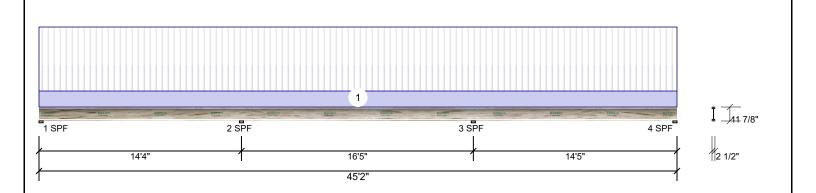
Page 31 of 33

Project #:

11.875" - PASSED **2FJ46 NI-40x**

Level: Level

Reactions UNPATTERNED Ib (Uplift)



Member information					Redections of the Att FERTED ID (Opinit)						
Type:	Joist	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const	
Spacing:	16" o.c.	Design Method:	ASD	1	Vertical	302	76	0	0	0	
Moisture Conditio	n: Dry	Building Code:	IBC/IRC 2015	2	Vertical	900	225	0	0	0	
Deflection LL:	480	Load Sharing:	No	3	Vertical	903	226	0	0	0	
Deflection TL:	240	Deck:	23/32 APA Rated Sturd-	4	Vertical	304	76	0	0	0	
Importance:	Normal - II		I-FloorOSB Nailed and Glued	'	70.1.00.	00.		· ·	v		
Temperature:	Temp <= 100°F										
	•	Ceiling: Gypsum 1/2"		Bea	rings						

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1686 ft-lb	30'9"	3760 ft-lb	0.448 (45%)	D+L	_LL
Pos Moment	1305 ft-lb	38'8 3/16"	3760 ft-lb	0.347 (35%)	D+L	L_L
Shear	595 lb	30'9"	1480 lb	0.402 (40%)	D+L	_LL
LL Defl inch	0.126 (L/1566)	22'6 9/16"	0.410 (L/480)	0.306 (31%)	L	_L_
TL Defl inch	0.124 (L/1376)	38'1 3/4"	0.709 (L/240)	0.174 (17%)	D+L	L_L

Γ	Bearing	Length	Dir.	Cap. R	eact D/L lb	Total	Ld. Case	Ld. Comb.
	1 - SPF	3.500"	Vert	30%	75 / 355	430	L_L	D+L
l	2 - SPF	3.500"	Vert	39%	225 / 958	1183	LL_	D+L
	3 - SPF	3.500"	Vert	40%	226 / 961	1187	_LL	D+L
l	4 - SPF	3.500"	Vert	30%	76 / 356	432	L_L	D+L

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	10 PSF	40 PSF	0.PSF	0 PSF	0 PSF	

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and 2. loads.

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

- Handling & Installation

 1. Engineered wood products must not be cut or drilled.
 Damaged products shall not be used.

 2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

 3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

 4. For flat roof, provide proper drainage to prevent ponding.
- ponding.

 5. Design assumes top flange to be laterally restrained

This design is valid until 5/24/2024

by attached sheathing or as specified in engineering notes.

Manufacturer Info Nordic Structures

1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

CSD BUILD



Date: 10/4/2021

Input by: Richard Stokes

Job Name: 21-6482 BEAM CALCULATIONS

Project #:

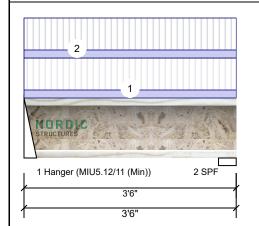
Bearings

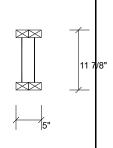
2 - SPF 3.500"

Vert

2-Ply - PASSED 1FJ4-2 11.875" NI-40x

Level: Level





D+L

Page 32 of 33

Member Information										
Type:	Girder									
Plies:	2									
Moisture Condition:	Dry									
Deflection LL:	480									
Deflection TL:	240									
Importance:	Normal - II									
Temperature:	Temp <= 100°F									

Application: Floor ASD Design Method: **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift) Snow Wind Brg Direction Live Dead Const 273 68 Vertical n 0 0 1 2 Vertical 287 72 0 0 0

Analysis Results Analysis Actual Location Allowed Comb. Case Capacity Moment 244 ft-lb 1'8 1/2" 7520 ft-lb 0.032 (3%) D+L L Unbraced 244 ft-lb 1'8 1/2" 7286 ft-lb 0.034 (3%) D+L L 313 lb 1 3/4" 2960 lb 0.106 (11%) D+L Shear L 0.002 1'8 1/2" 0.078 (L/480) 0.025 (3%) L LL Defl inch (L/18942) 0.002 1'8 1/2" 0.156 (L/240) 0.016 (2%) D+L TL Defl inch (L/15154)

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 2.500" Vert 13% 68 / 273 342 L D+L Hanger

72 / 287

358 L

12%

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top flange must be laterally braced at bearings.
- 7 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF		
2	Uniform		3-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF		

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
 2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.
 3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
 4. For flat roof, provide proper drainage to prevent ponding.

5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering

This design is valid until 5/24/2024

Manufacturer Info Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100

Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142



Date: 10/4/2021

Input by: Richard Stokes

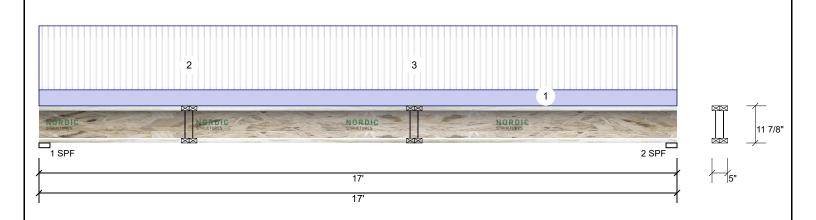
Job Name: 21-6482 BEAM CALCULATIONS

Page 33 of 33

Project #:

2-Ply - PASSED 1FJ18-2B NI-40x 11.875"

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Brg Direction Live Dead Snow Wind Const Type: Floor Plies: 2 Design Method: ASD 668 167 0 Vertical n 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 2 Vertical 572 143 0 0 0 Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F **Bearings** Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.500" 167 / 668 835 L D+L Vert 29%

2 - SPF 3.500"

Vert

25%

143 / 572

715 L

D+I

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3615 ft-lb	9'10 1/2"	7520 ft-lb	0.481 (48%)	D+L	L
Unbraced	3615 ft-lb	9'10 1/2"	3905 ft-lb	0.926 (93%)	D+L	L
Shear	824 lb	2 3/4"	2960 lb	0.278 (28%)	D+L	L
LL Defl inch	0.211 (L/940)	8'6 1/4"	0.414 (L/480)	0.511 (51%)	L	L
TL Defl inch	0.264 (L/752)	8'6 1/4"	0.827 (L/240)	0.319 (32%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange must be laterally braced at a maximum of 10'5" o.c.
- 6 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Тор	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Point	4-0-0		Near Face	68 lb	273 lb	0 lb	0 lb	0 lb	1FJ4-2 Brg 1
3	Point	10-0-0		Near Face	72 lb	287 lb	0 lb	0 lb	0 lb	1FJ4-2 Brg 2

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and

Engineered Wood Products

Dry service conditions, unless noted otherwise
 No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

Handling & Installation

I. Engineered wood products must not be cut or drilled.
Damaged products shall not be used.

2. Refer to the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.

3. Provide lateral support at bearing points to prevent lateral displacement and rotation.

4. For flat roof, provide proper drainage to prevent ponding.

ponding.

5. Design assumes top flange to be laterally restrained

by attached sheathing or as specified in engineering

This design is valid until 5/24/2024

Manufacturer Info Nordic Structures 1100 Avenue des Canadiens-de-Montréal, Suite 100 Montreal, Québec, Canada H3B 2S2 (866) 871-3418 www.nordic.ca APA PR-L274C

Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

Version 21.40.338 Powered by iStruct™ Dataset: 21070201.142

