FRONT ELEVATION

SCALE 1/8" = 1'-0"

NOTE: 9'-0" CEILINGS AT FIRST FLOOR ONLY

FLASH ALL VALLEYS (TYP.)

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
06/02/2022
Harnett COUNTY NORTH CAROLINA

REAR ELEVATION

SCALE 1/8" = 1'-0"

General Notes

1.) MAIN FLOOR PLATE HEIGHT TO BE 8'-0" UNLESS NOTED OTHERWISE.

2.) OPTIONAL BONUS PLATE HEIGHT TO BE 8'-0" UNLESS NOTED OTHERWISE.

3.) INTERIOR & EXTERIOR WALLS TO BE DRAWN @ 3 1/2" UNLESS NOTED OTHERWISE.

4.) ALL ANGLES TO BE DRAWN AT 45° OR 90° UNLESS NOTED OTHERWISE.

5.) WINDOW HEADER HEIGHT TO BE SET @ 6'-11" UNLESS NOTED OTHERWISE. HEADER SIZE AND MATERIAL TO BE DETERMINED & VERIFIED BY FRAMER, BUILDER, TRUSS SHOP OR BY A LICENSED ENGINEER.

6.) SIZE, LOCATION AND MATERIALS OF BEAMS TRUSSES, GIRDERS AND HEADERS TO BE DETERMINED & VERIFIED BY BUILDER, FRAMER TRUSS SHOP OR LICENSED ENGINEER.

7.) FOOTER SIZE, MATERIAL & LOCATIONS TO BE VERIFIED AND DETERMINED BY BUILDER, FOOTER CONTRACTOR OR LICENSED ENGINEER.

8.) ROOF VENTELLATION TO BE DETERMINED & VERIFIED BUILDER,ROOFING COTRACTOR OR LICENSED ENGINEER.

9.) ALL MECHANICAL SYSTEMS DESIGNS, LOCATIONS AND SIZING TO BE DETERMINED & VERIFIED BY BUILDER, APPROPRIATE TRADE CONTRACTOR AND OR LICENSED ENGINEER.

10.) BUILDER RESPONSIBLE FOR VERIFYING AND COMPLYING WITH ALL LOCAL, STATE & NATIONAL CODES.

11.) LOCAL, STATE AND NATIONAL CODES TAKE PRECIDENCE OVER DRAWINGS.

12.) BUILDER TO VERIFY ALL DIMENSIONS.

SQUARE FOOT KEY

FIRST FLOOR TO FRAMING	1784
SECOND FLOOR TO FRAMING	1193
HEATED & COOLED	2977
COVERED FRONT PORCH	126
GARAGE AREA	426
TOTAL UNDER BEAM AREA	3529
OPTIONAL COVERED REAR PATIO	144

Front & Rear Elevation

Caviness Land
Building and Development Company
Builder of Excellence

X

SUBDIVISION NAME:
X

CITY:
X

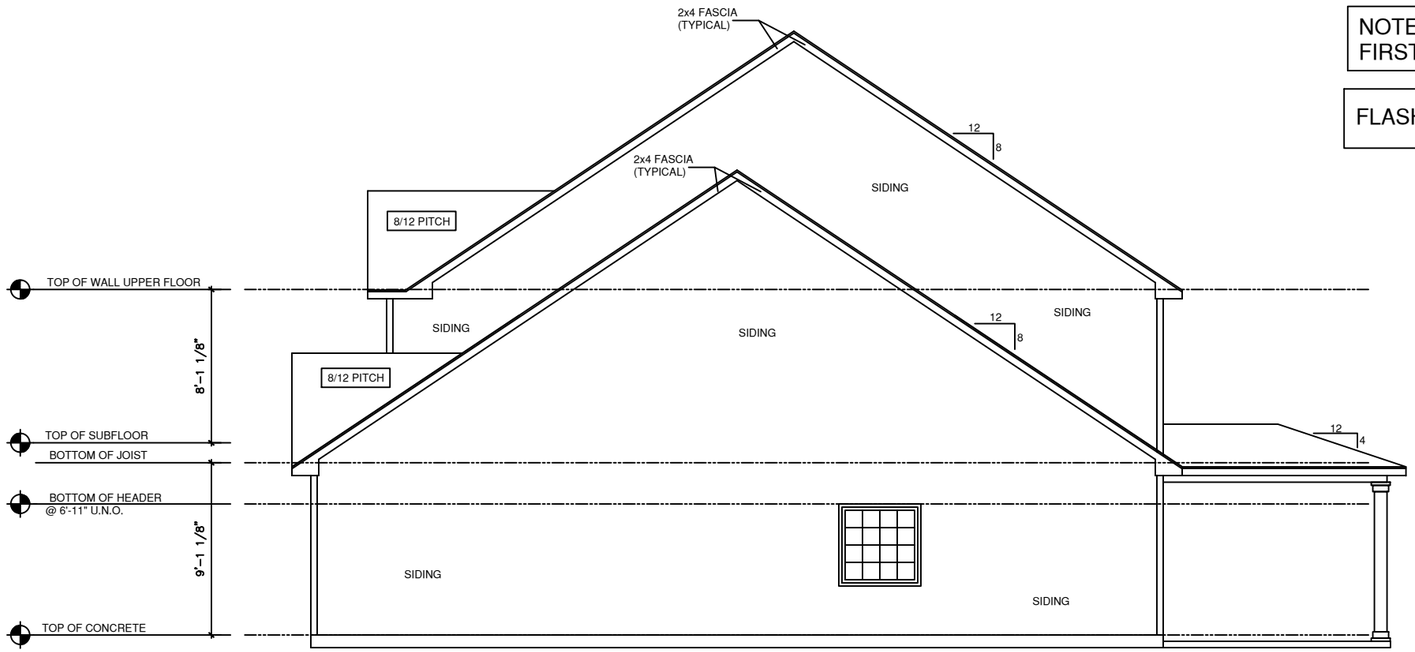
PHASE:
X

BLOCK:
X

LOT:
X

PLAN INDEX

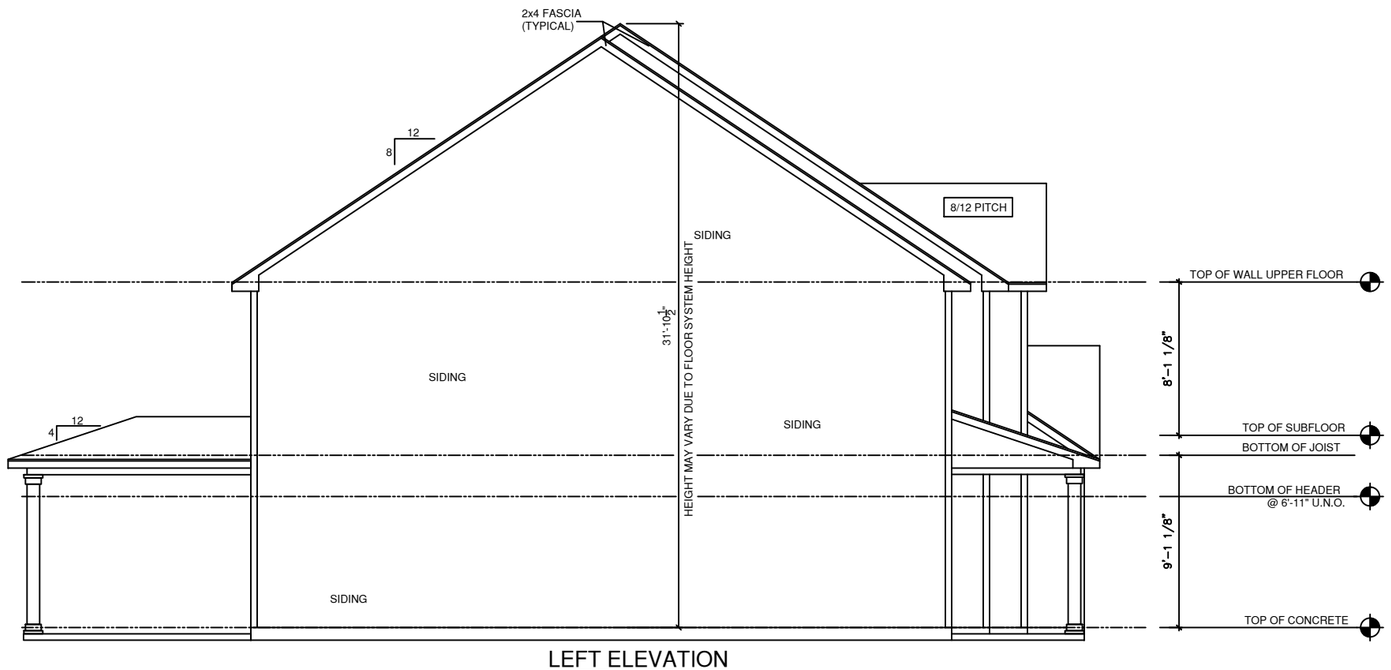
CL 2977



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

NOTE: 9'-0" CEILINGS AT FIRST FLOOR ONLY

FLASH ALL VALLEYS (TYP.)



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

General Notes

1.) MAIN FLOOR PLATE HEIGHT TO BE 8'-0" UNLESS NOTED OTHERWISE.
2.) OPTIONAL BONUS PLATE HEIGHT TO BE 8'-0" UNLESS NOTED OTHERWISE.
3.) INTERIOR & EXTERIOR WALLS TO BE DRAWN @ 3 1/2" UNLESS NOTED OTHERWISE.
4.) ALL ANGLES TO BE DRAWN AT 45° OR 90° UNLESS NOTED OTHERWISE.
5.) WINDOW HEADER HEIGHT TO BE SET @ 6'-11" UNLESS NOTED OTHERWISE. HEADER SIZE AND MATERIAL TO BE DETERMINED & VERIFIED BY FRAMER, BUILDER, TRUSS SHOP OR BY A LICENSED ENGINEER.
6.) SIZE, LOCATION AND MATERIALS OF BEAMS TRUSSES, GIRDERS AND HEADERS TO BE DETERMINED & VERIFIED BY BUILDER, FRAMER TRUSS SHOP OR LICENSED ENGINEER.
7.) FOOTER SIZE, MATERIAL & LOCATIONS TO BE VERIFIED AND DETERMINED BY BUILDER, FOOTER CONTRACTOR OR LICENSED ENGINEER.
8.) ROOF VENTELLATION TO BE DETERMINED & VERIFIED BUILDER,ROOFING COTRACTOR OR LICENSED ENGINEER.
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11.) LOCAL, STATE AND NATIONAL CODES TAKE PRECIDENCE OVER DRAWINGS.
12.) BUILDER TO VERIFY ALL DIMENSIONS.

SQUARE FOOT KEY

FIRST FLOOR TO FRAMING	1784
SECOND FLOOR TO FRAMING	1193
HEATED & COOLED	2977
COVERED FRONT PORCH	126
GARAGE AREA	426
TOTAL UNDER BEAM AREA	3529
OPTIONAL COVERED REAR PATIO	144

Right & Left Elevation

Caviness Land
Building and Development Company
Builder of Excellence

X

SUBDIVISION NAME:
X

CITY:
X

PHASE:
X

BLOCK:
X

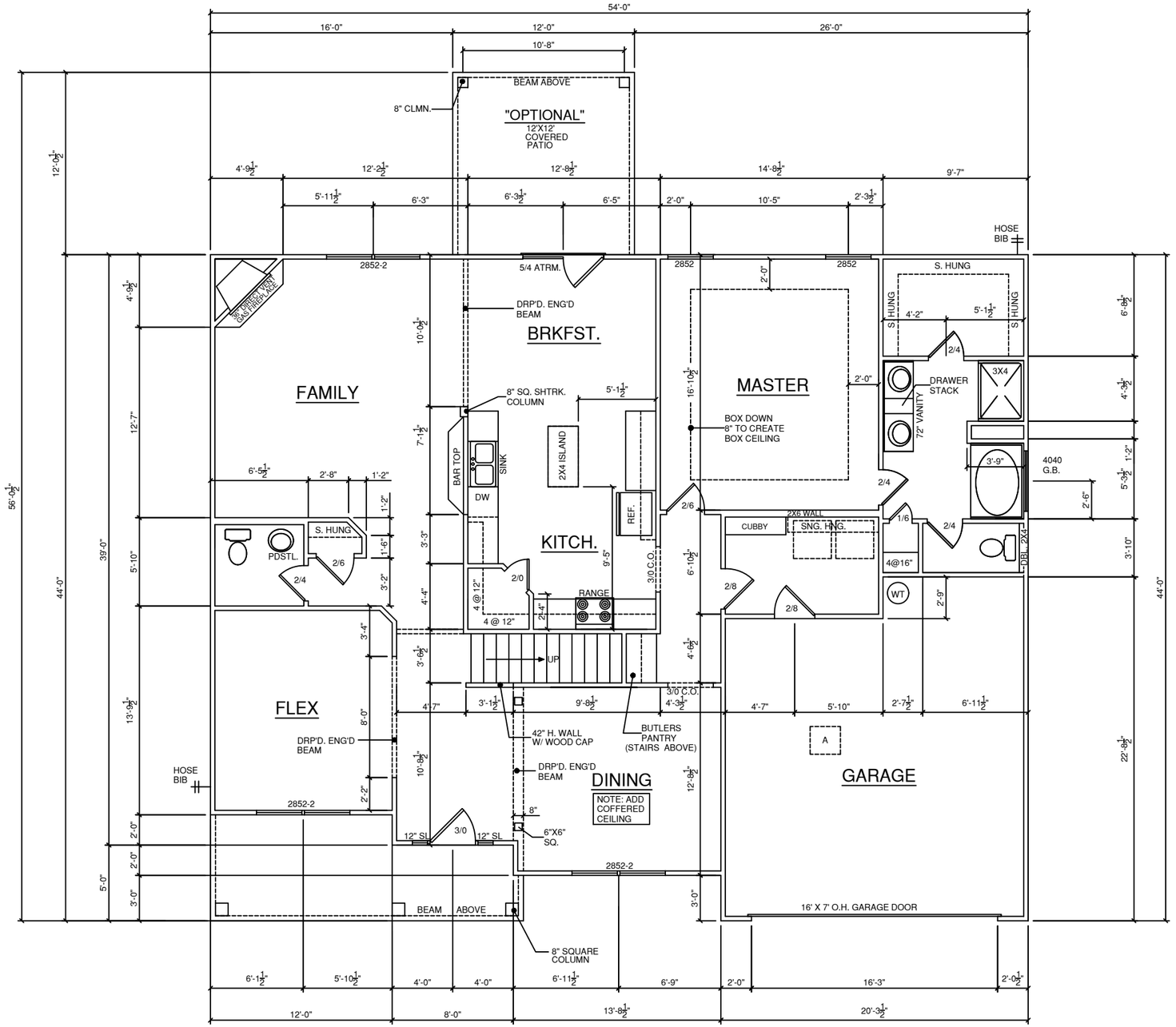
LOT:
X

PLAN INDEX
CL 2977

NOTE: OPT. KITCHEN ISLAND REQUIRES CONDUIT UNDER SLAB PRIOR TO FOUNDATION POUR

NOTE: 9'-0" CEILINGS AT FIRST FLOOR ONLY

FLASH ALL VALLEYS (TYP.)



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

General Notes

1.) MAIN FLOOR PLATE HEIGHT TO BE 9'-0" UNLESS NOTED OTHERWISE.

2.) OPTIONAL BONUS PLATE HEIGHT TO BE 8'-0" UNLESS NOTED OTHERWISE.

3.) INTERIOR & EXTERIOR WALLS TO BE DRAWN @ 3 1/2" UNLESS NOTED OTHERWISE.

4.) ALL ANGLES TO BE DRAWN AT 45° OR 90° UNLESS NOTED OTHERWISE.

5.) WINDOW HEADER HEIGHT TO BE SET @ 6'-11" UNLESS NOTED OTHERWISE. HEADER SIZE AND MATERIAL TO BE DETERMINED & VERIFIED BY FRAMER, BUILDER, TRUSS SHOP OR BY A LICENSED ENGINEER.

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11.) LOCAL, STATE AND NATIONAL CODES TAKE PRECIDENCE OVER DRAWINGS.

12.) BUILDER TO VERIFY ALL DIMENSIONS.

SQUARE FOOT KEY

FIRST FLOOR TO FRAMING	1784
SECOND FLOOR TO FRAMING	1193
HEATED & COOLED	2977
COVERED FRONT PORCH	126
GARAGE AREA	426
TOTAL UNDER BEAM AREA	3529
OPTIONAL COVERED REAR PATIO	144

First Floor Plan

Caviness Land
Building and Development Company
Builder of Excellence

X

SUBDIVISION NAME:
X

CITY:
X

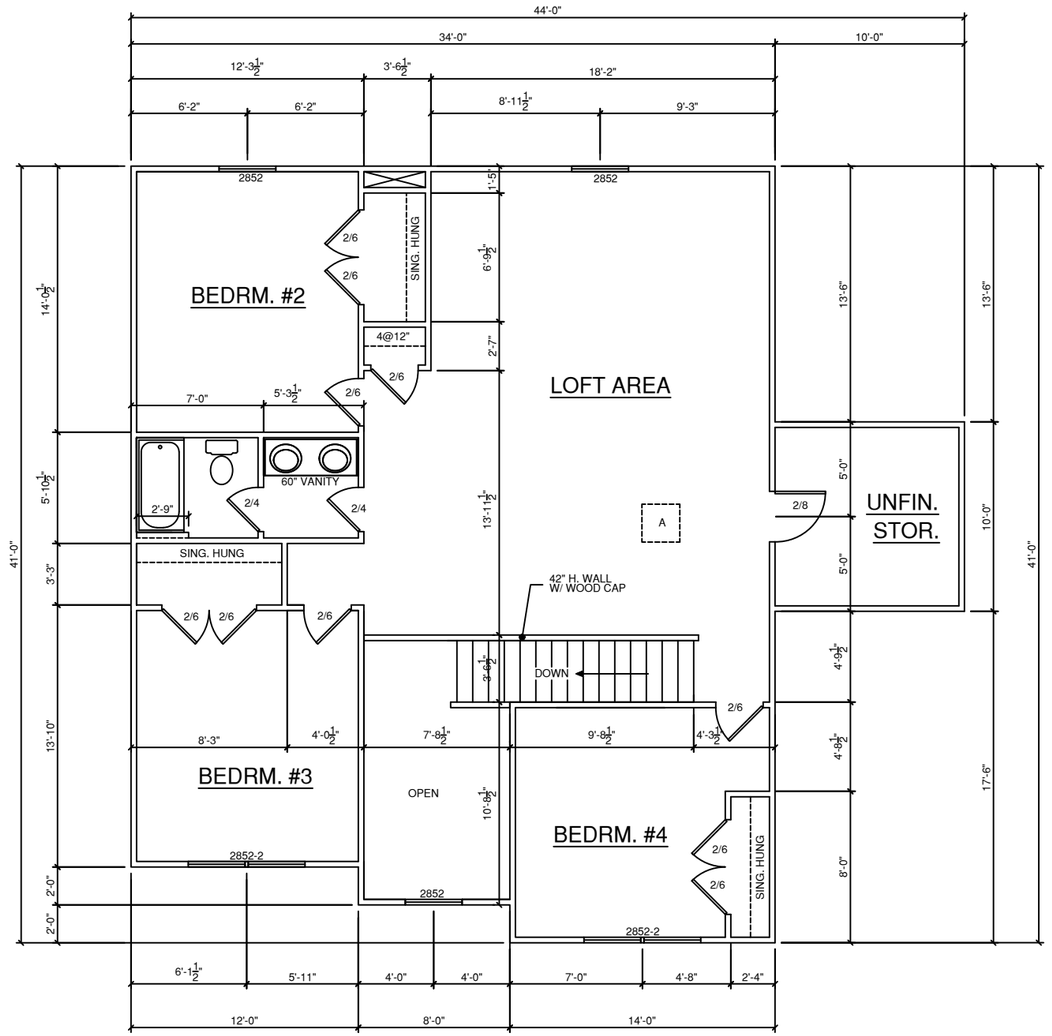
PHASE:
X

BLOCK:
X

LOT:
X

PLAN INDEX

CL 2977



SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

General Notes

1.) MAIN FLOOR PLATE HEIGHT TO BE 9'-0" UNLESS NOTED OTHERWISE.

2.) OPTIONAL BONUS PLATE HEIGHT TO BE 8'-0" UNLESS NOTED OTHERWISE.

3.) INTERIOR & EXTERIOR WALLS TO BE DRAWN @ 3 1/2" UNLESS NOTED OTHERWISE.

4.) ALL ANGLES TO BE DRAWN AT 45° OR 90° UNLESS NOTED OTHERWISE.

5.) WINDOW HEADER HEIGHT TO BE SET @ 6'-11" UNLESS NOTED OTHERWISE. HEADER SIZE AND MATERIAL TO BE DETERMINED & VERIFIED BY FRAMER, BUILDER, TRUSS SHOP OR BY A LICENSED ENGINEER.

6.) SIZE, LOCATION AND MATERIALS OF BEAMS TRUSSES, GIRDERS AND HEADERS TO BE DETERMINED & VERIFIED BY BUILDER, FRAMER TRUSS SHOP OR LICENSED ENGINEER.

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10.) BUILDER RESPONSIBLE FOR VERIFYING AND COMPLYING WITH ALL LOCAL, STATE & NATIONAL CODES.

11.) LOCAL, STATE AND NATIONAL CODES TAKE PRECIDENCE OVER DRAWINGS.

12.) BUILDER TO VERIFY ALL DIMENSIONS.

SQUARE FOOT KEY

FIRST FLOOR TO FRAMING	1784
SECOND FLOOR TO FRAMING	1193
HEATED & COOLED	2977
COVERED FRONT PORCH	126
GARAGE AREA	426
TOTAL UNDER BEAM AREA	3529
OPTIONAL COVERED REAR PATIO	144

Second Floor

Caviness Land
Building and Development Company
Builder of Excellence

X

SUBDIVISION NAME: X

CITY: X

PHASE: X

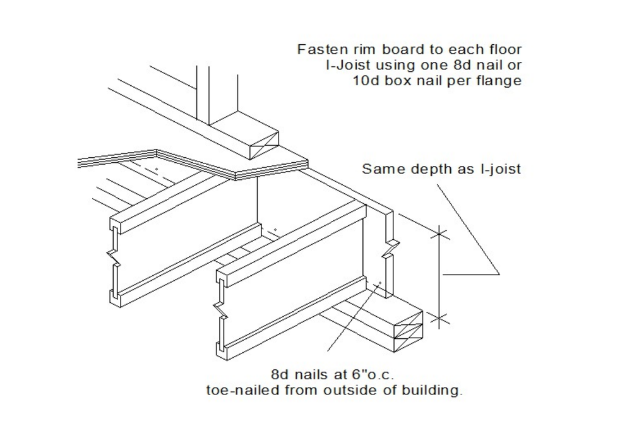
BLOCK: X

LOT: X

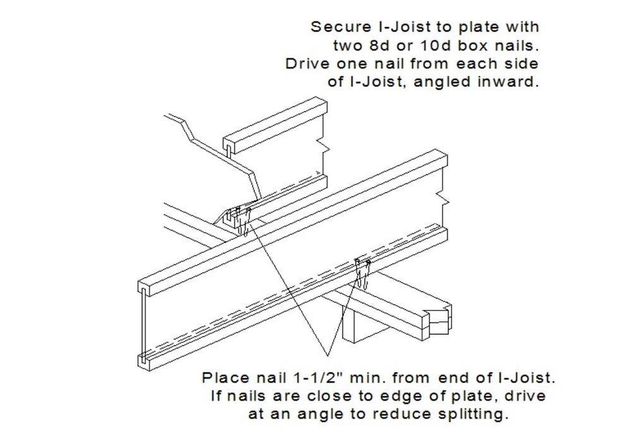
PLAN INDEX

CL 2977

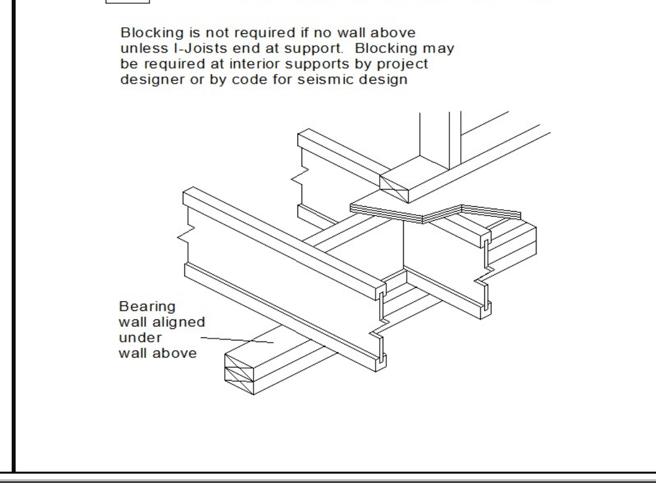
A1 RIM BOARD



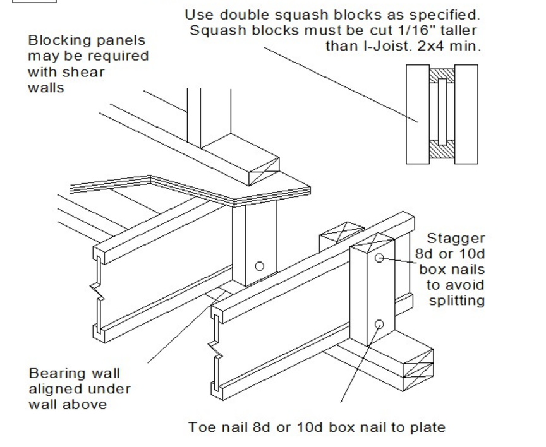
A5 JOIST SUPPORT NAILING



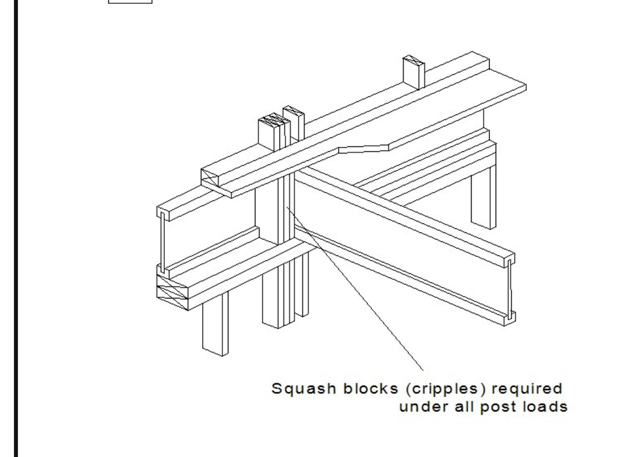
B3 BLOCKING AT INTERIOR SUPPORT



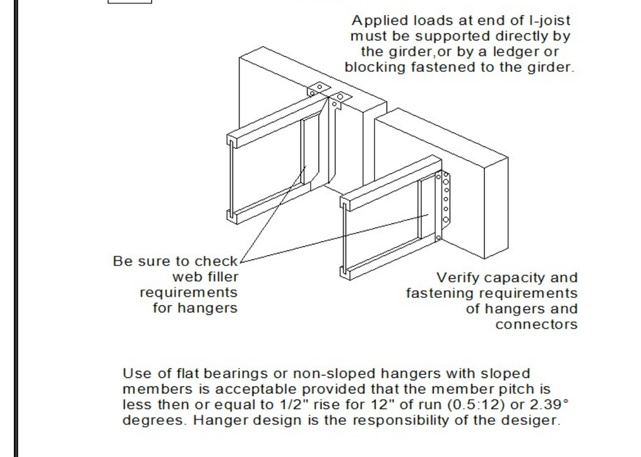
B2 SQUASH BLOCKS



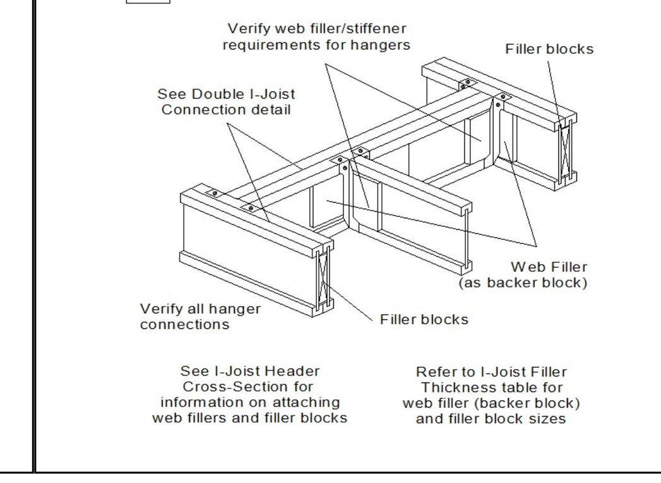
D2 POST LOADS



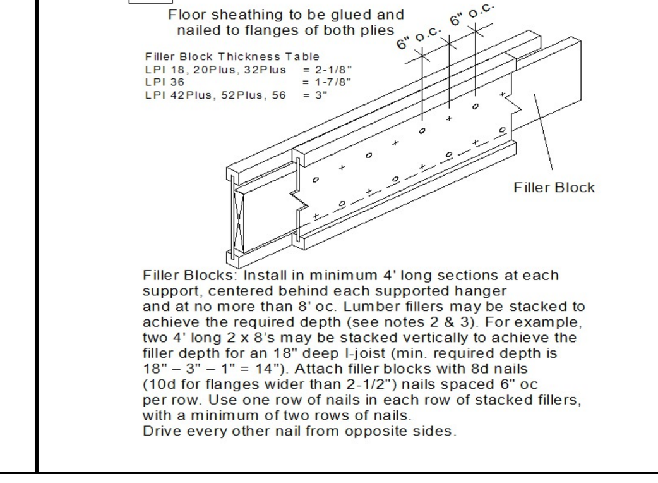
E2 Hanger Detail



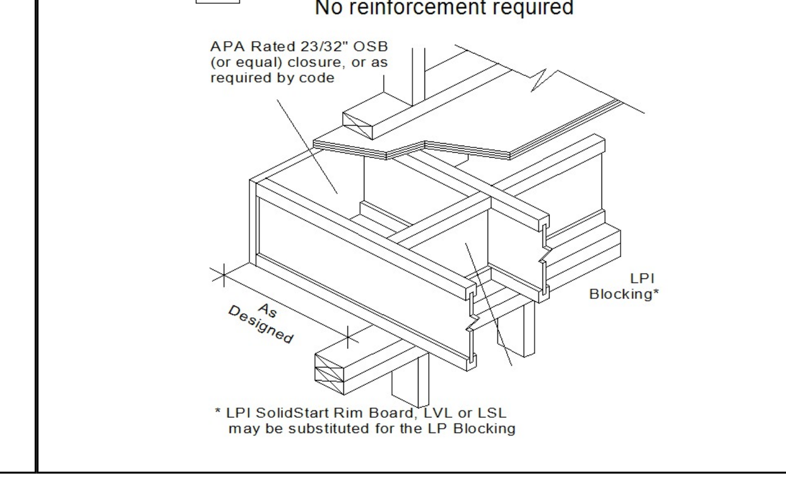
E3 I-JOIST HEADER

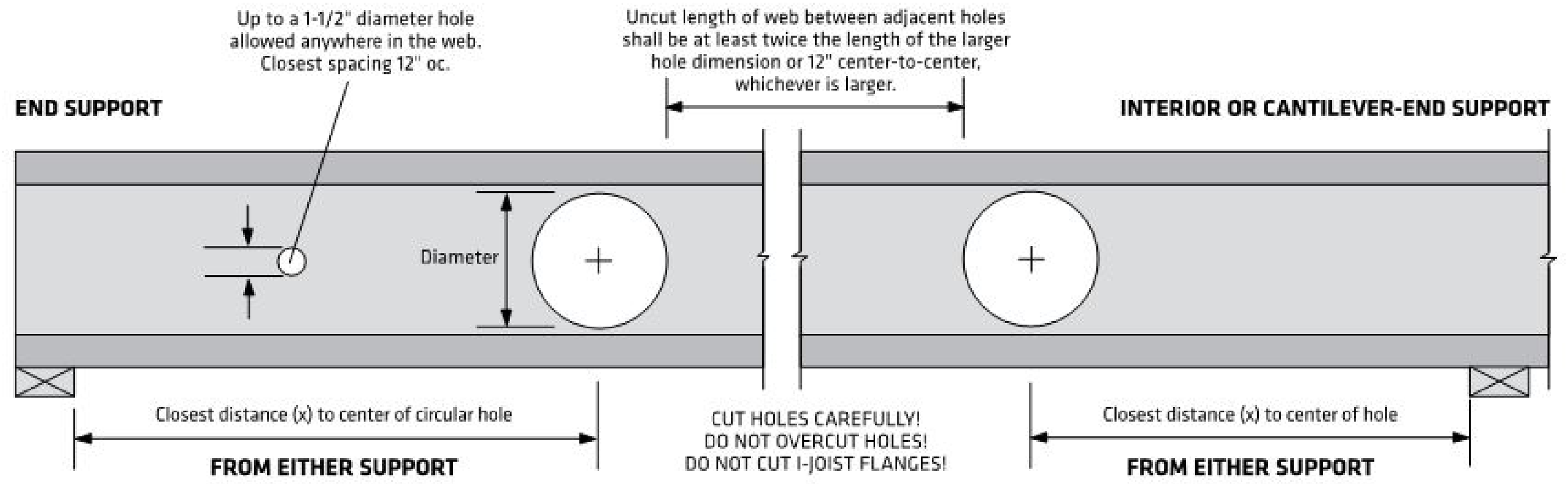


E5 DOUBLE I-JOIST CONNECTION



C1 CANTILEVER DETAIL
No reinforcement required





TO USE:

1. Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4. Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Diameter column gives the minimum distance from the inside face of bearing to the center of a circular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support						Distance from Interior or Cantilever-End Support					
		Hole Diameter						Hole Diameter					
		2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
	18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
	22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
	26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-
16"	18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"
	22'	1'-4"	2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"
	26'	3'-6"	4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"
	30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"

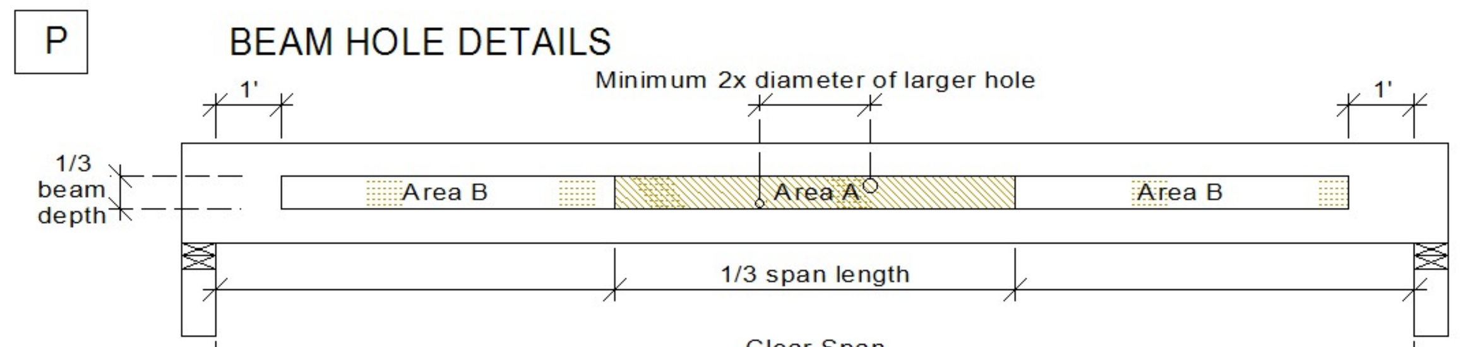
DESIGN ASSUMPTIONS:

1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
3. Clear Span has not been verified for these joists and is shown for informational purposes only! Verify that the joist selected will work for the span and loading conditions needed before checking hole location.
4. The maximum hole depth for circular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI joists.
5. Holes cannot be located in the span where designated "-", without further analysis by a design professional.

NOTES:

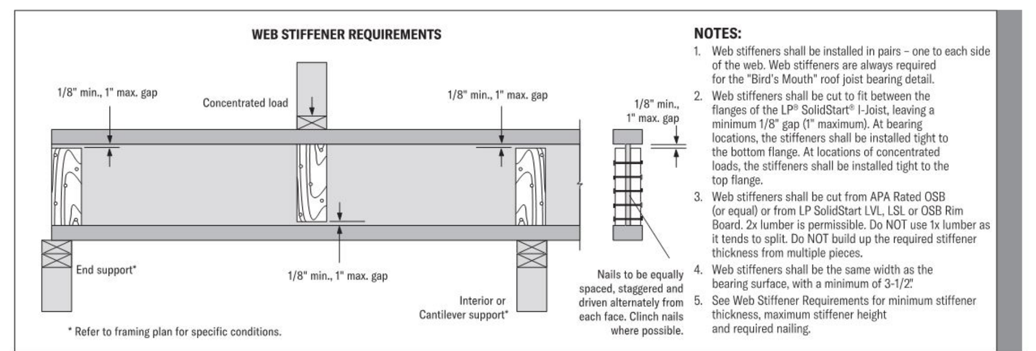
1. Holes may be placed anywhere within the depth of the joist. A minimum 1/4" clear distance is required between the hole and the flanges.
2. Round holes up to 1-1/2" diameter may be placed anywhere in the web.
3. Perforated "knockouts" may be neglected when locating web holes.
4. Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
5. Multiple holes shall have a clear separation along the length of the joist of at least twice the length of the larger adjacent hole, or a minimum of 12" center-to-center, whichever is greater.
6. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes aligned parallel to the joist length may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangle or an 8" diameter round hole are acceptable for the joist depth at that location and completely encompass the holes.
7. For conditions not covered in this table, use LP's design software or contact your local LP® SolidStart® Engineered Wood Products distributor for more information.

P BEAM HOLE DETAILS



NOTES:
1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP® SolidStart® Engineered Wood Products distributor for assistance.
2. Round holes can be drilled anywhere in "Area A" provided that: no more than four holes are cut, with the minimum spacing described in the diagram. The maximum hole size is 1-1/2" for depths up to 9-1/4," and 2" for depths greater than 9-1/4."
3. Rectangular holes are NOT allowed.
4. DO NOT drill holes in cantilevers without prior approval from the project designer.
5. Other hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your LP SolidStart Engineered Wood Products distributor.
6. Up to three 3/4" holes may be drilled in "Area B" to accommodate wiring and/or water lines. These holes shall be at least 12" apart. The holes shall be located in the middle third of the depth, or a minimum of 3" from the bottom and top of the beam. For beams shallower than 9-1/4", locate holes at mid-depth.
7. Protect plumbing holes from moisture.

Web Stiffeners, Rim & Blocking, Nailing

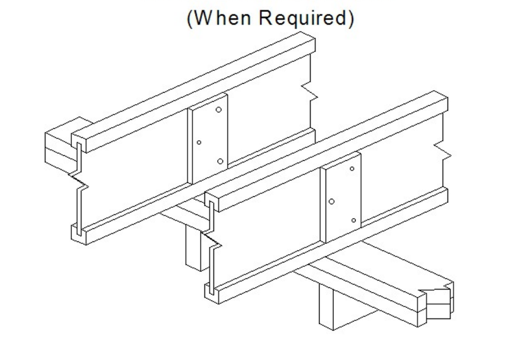


WEB STIFFENER REQUIREMENTS

Series	Depth	Minimum Thickness	Maximum Height	Nail Size*	Nail Qty
LPI 18, LPI 20Plus, LPI 32Plus	9-1/2"	23/32"	6-3/8"	8d (2-1/2")	3
	11-7/8"	23/32"	8-3/4"	8d (2-1/2")	3
	14"	23/32"	10-7/8"	8d (2-1/2")	3
	16"	23/32"	12-7/8"	8d (2-1/2")	3
LPI 36	11-7/8"	23/32"	8-3/4"	8d (2-1/2")	4
	14"	23/32"	10-7/8"	8d (2-1/2")	5
	16"	23/32"	12-7/8"	8d (2-1/2")	6
LPI 42Plus, LPI 52Plus	9-1/2"	1-1/2"	6-3/8"	10d (3")	3
	11-7/8"	1-1/2"	8-3/4"	10d (3")	3
	14"	1-1/2"	10-7/8"	10d (3")	3
	16"	1-1/2"	12-7/8"	10d (3")	3
LPI 56	11-7/8"	1-1/2"	8-3/4"	10d (3")	4
	14"	1-1/2"	10-7/8"	10d (3")	5
	16"	1-1/2"	12-7/8"	10d (3")	6

* Nails may be Box or Common.

B1 WEB STIFFENERS AT INTERIOR SUPPORT (When Required)



Verify stiffener requirements

1st Floor

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20 Plus	2.5	11.875			7	24-0-0
J4	LPI 20 Plus	2.5	11.875			6	22-0-0
J3	LPI 20 Plus	2.5	11.875			8	16-0-0
J2	LPI 20 Plus	2.5	11.875			25	14-0-0
J13	LPI 20 Plus	2.5	11.875	1	2	2	12-0-0
J1	LPI 20 Plus	2.5	11.875			27	12-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB3	LP-LVL 2900Fb-2.0E	1.75	11.875	2	2	4	14-0-0
FB5	LP-LVL 2900Fb-2.0E	1.75	11.875	1	2	2	12-0-0

Beam By Others (Dropped)

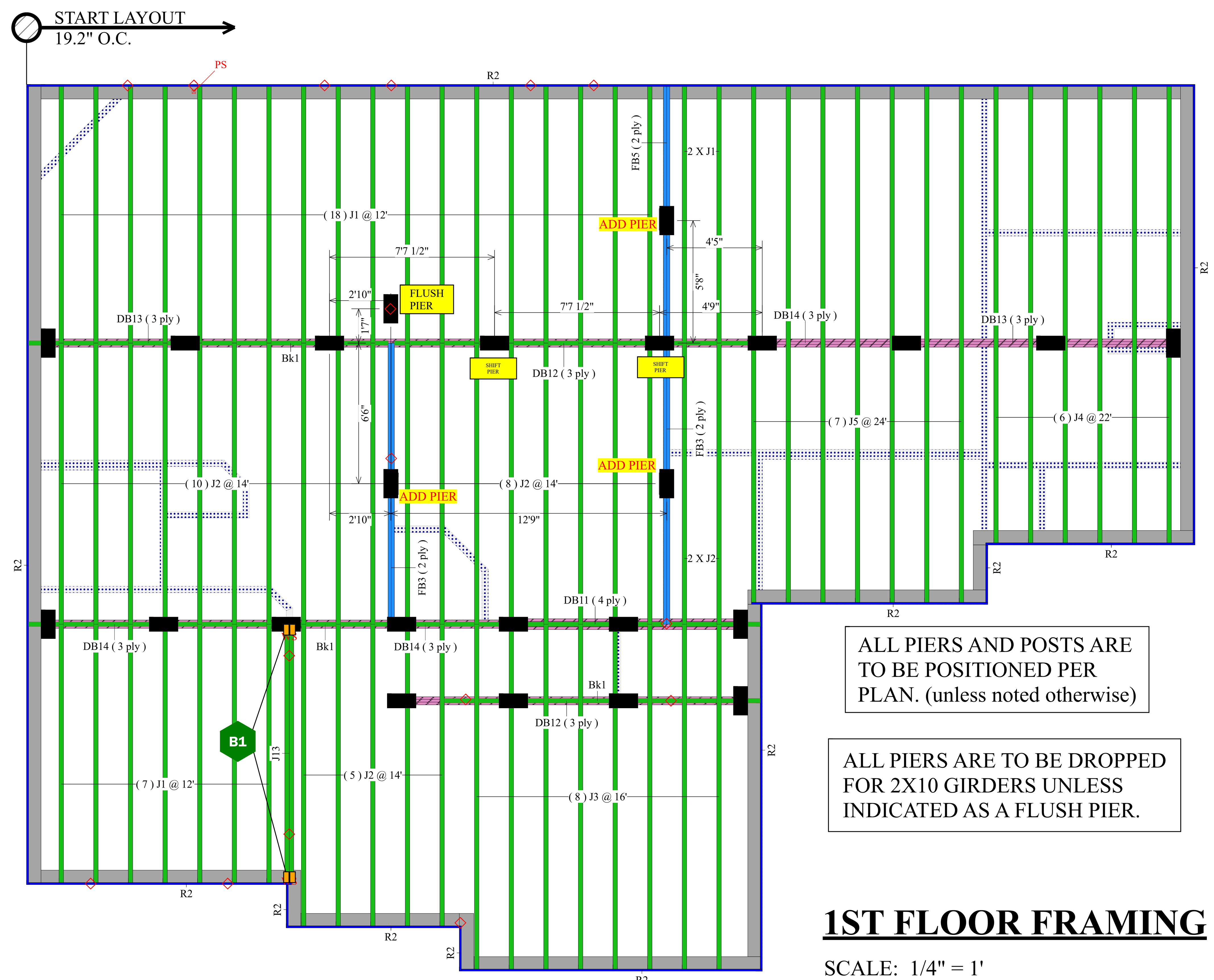
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB12	[2x10]			2	3	6	16-0-0
DB13	[2x10]			2	3	6	14-0-0
DB14	[2x10]			3	3	9	12-0-0
DB11	[2x10]			1	4	4	12-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R2	LP APA Rated OSB 1.125 X 11.875	1.125	11.875			16	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
Bk1	LPI 20 Plus	2.5	11.875	LinFt		Varies	71-0-0



ALL PIERS AND POSTS ARE TO BE POSITIONED PER PLAN. (unless noted otherwise)

ALL PIERS ARE TO BE DROPPED FOR 2X10 GIRDERS UNLESS INDICATED AS A FLUSH PIER.

1ST FLOOR FRAMING

SCALE: 1/4" = 1'

U.S. LUMBER

2160 Satellite Blvd., Suite 450
Duluth, GA 30097
888-613-5078

LP BUILDING PRODUCTS

84 LUMBER Build on what we know™

Dealer
84 Lumber-Fayetteville #2307

Dealer Address
620 Belt Road
Fayetteville, NC 28301
(910) 867-9185

Project
CL2977 280 Forest GR Crawl

Created
March 24, 2016

Layout Name
CL2977 280 Forest GR Crawl

Description
Caviness Land
CL2977 280 Forest GR Crawl

Designer
Kyle Militzer

Revised
May 26, 2022

1st Floor

Design Method	ASD (USA)
Building Code	IRC 2012
Floor	
Loads	
Live	40
Dead	10
Deflection Joist	
LL Span L/	480
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Flush Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Dropped Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Header	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	
Decking	OSB 23/32 APA Rated Sturd-I-Floor
Fastener	Nailed & Glued

Legend

WS	Web Stiffener
-WS	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load From Above
	Exterior Bearing Wall
	Interior Bearing Wall
	Non-Bearing Wall
	LP OSB/LSL Rim (Color Varies)
	LPI 18/20 I Joist
	LPI 32 I Joist
	LPI 42/56 I Joist
	Triforce/Open Joist (Color Varies)
	Bailey Projoist TE Truss
	Dropped Beam (Color Varies By Product)
	Flush Beam (Color Varies By Product)
	Field Framed Pony Wall
■	Column

Important Notes

WARNING: Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

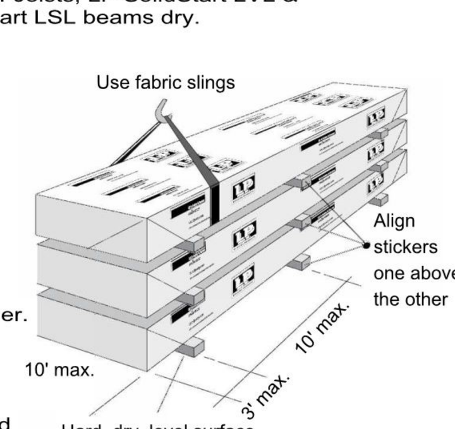
These instructions are offered as a guide to good practice in the handling, storage and installation of LP® SolidStart® I-Joists, LP SolidStart LVL & LP SolidStart LSL beams. They are, however, solely general recommendations and, in some instances, other or additional precautions may be desirable. In all cases, the procedures used should be as specified by the architect/engineer responsible for the entire building.

- This is not intended as a manual for selecting products and assumes that components and details have been specified correctly.
- Consult the LP SolidStart I-Joist, LP SolidStart LVL & LP SolidStart LSL brochures or contact your LP SolidStart products distributor for assistance.
- All rim joists, blocking, connections and temporary bracing must be installed before erectors are allowed on the structure.
- No loads other than the weight of the erectors are to be imposed on the structure before it is permanently sheathed.
- After sheathing, do not overload joists with construction materials exceeding design loads.
- LP SolidStart I-Joists, LP SolidStart LVL & LP SolidStart LSL beams must be used under dry, covered and well ventilated interior conditions in which the equivalent moisture content in lumber will not exceed 16%.

Handling & Storage

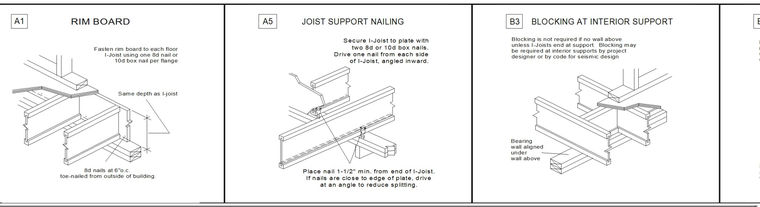
Keep LP SolidStart I-Joists, LP SolidStart LVL & LP SolidStart LSL beams dry.

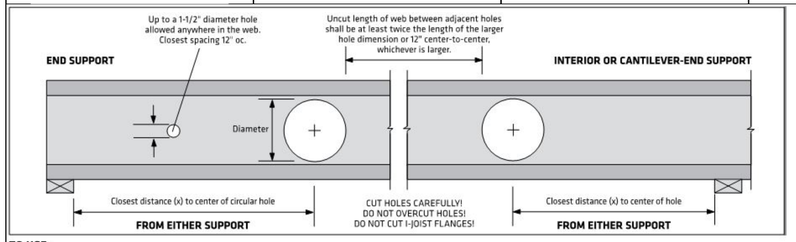
- Unload products carefully by lifting. Support the bundles to reduce excessive bowing. Individual products should be handled in a manner which prevents physical damage during measuring, cutting, erection, etc. I-Joists should be handled vertically and not flatwise.
- Keep stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2 x 4 (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically.
- Product must not be stored in contact with the ground, or have prolonged exposure to the weather.
- Use forklifts and cranes carefully to avoid damaging product.
- Do not use visually damaged product. Call your local LP SolidStart Engineered Wood Products distributor for assistance when damaged products are encountered.



CSD DRAW DESIGN BUILD

isPlan





TO USE:

1. Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4. Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Diameter column gives the minimum distance from the inside face of bearing to the center of a circular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support – Hole Diameter						Distance from Interior or Cantilever-End Support – Hole Diameter					
		2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
	18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
	22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
	26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-
16"	18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"
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	30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"

DESIGN ASSUMPTIONS:

1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
3. Clear Span has not been verified for these joists and is shown for informational purposes only! Verify that the joist selected will work for the span and loading conditions needed before checking hole location.
4. The maximum hole depth for circular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI joists.
5. Holes cannot be located in the span where designated "-", without further analysis by a design professional.

NOTES:

1. Holes may be placed anywhere within the depth of the joist. A minimum 1/4" clear distance is required between the hole and the flanges.
2. Round holes up to 1-1/2" diameter may be placed anywhere in the web.
3. Perforated "knockouts" may be neglected when locating web holes.
4. Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
5. Multiple holes shall have a clear separation along the length of the joist of at least twice the length of the larger adjacent hole, or a minimum of 12" center-to-center, whichever is greater.
6. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes aligned parallel to the joist length may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangle or an 8" diameter round hole are acceptable for the joist depth at that location and completely encompass the holes.
7. For conditions not covered in this table, use LP's design software or contact your local LP® SolidStart® Engineered Wood Products distributor for more information.

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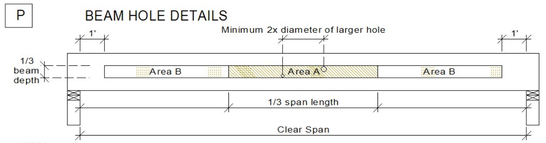
BEAM HOLE DETAILS



NOTES:

1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP® SolidStart® Engineered Wood Products distributor for assistance.
2. Round holes can be drilled anywhere in "Area A" provided that: no more than four holes are cut, with the minimum spacing described in the diagram. The maximum hole size is 1-1/2" for depths up to 9-1/4," and 2" for depths greater than 9-1/4."
3. Rectangular holes are NOT allowed.
4. DO NOT drill holes in cantilevers without prior approval from the project designer.
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6. Up to three 3/4" holes may be drilled in "Area B" to accommodate wiring and/or water lines. These holes shall be at least 12" apart. The holes shall be located in the middle third of the depth, or a minimum of 3" from the bottom and top of the beam. For beams shallower than 9-1/4", locate holes at mid-depth.
7. Protect plumbing holes from moisture.

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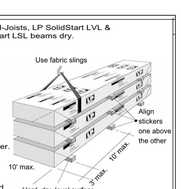


2nd Floor

Beam By Others

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB5	[2x10]			1	2	2	14-0-0
DB3	[2x10]			1	2	2	10-0-0
HD2	[2x10]			1	2	2	10-0-0
DB2	[2x10]			1	2	2	8-0-0
DB1	[2x10]			1	2	2	4-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HUS1.81/10			30 16d	10 16d
H2	2	IUS2.56/14 (Min)			12 10dx1 1/2	

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
B1	LPI 20 Plus	2.5	14	LinFt		Varies	44-0-0

2nd Floor

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J11	LPI 20 Plus	2.5	14			1	18-0-0
J4	LPI 20 Plus	2.5	14			26	18-0-0
J7	LPI 20 Plus	2.5	14			6	14-0-0
J3	LPI 20 Plus	2.5	14			6	14-0-0
J9	LPI 20 Plus	2.5	14			2	6-0-0
J6	LPI 20 Plus	2.5	14			1	6-0-0
FB2	LPI 20 Plus	2.5	14			1	6-0-0

LVL/LSL (Flush)

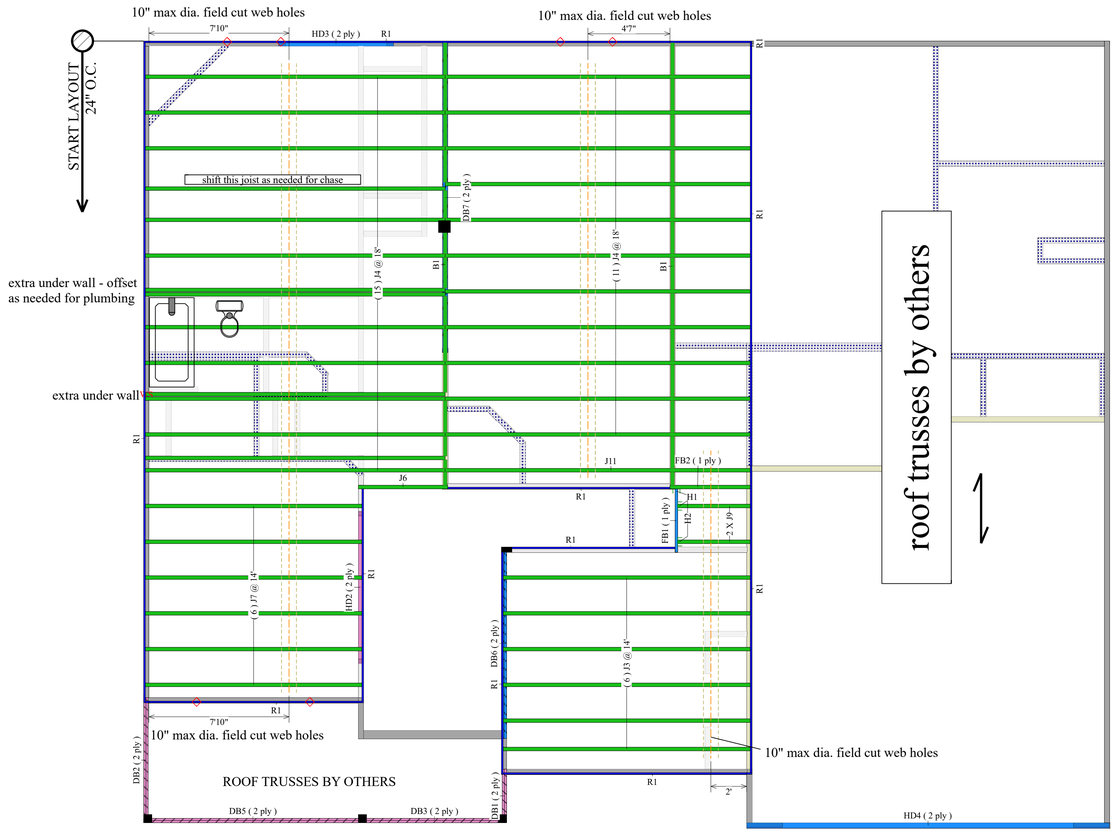
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB1	LP-LVL 2900Fb-2.0E	1.75	11.875			1	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB7	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	18-0-0
DB6	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	12-0-0
HD3	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	8-0-0
HD4	LP-LVL 2900Fb-2.0E	1.75	16	1	2	2	22-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	LP APA Rated OSB 1.125 X 14	1.125	14			16	12-0-0



2ND FLOOR FRAMING

SCALE: 1/4" = 1'

U.S. LUMBER

2160 Satellite Blvd., Suite 450
Duluth, GA 30097
888-613-5078

LP BUILDING PRODUCTS

84 LUMBER Build on what we know™

Dealer
84 Lumber-Fayetteville #2307

Dealer Address
620 Belt Road
Fayetteville, NC 28301
(910) 867-9185

Project
CL2977 280 Forest GR Crawl

Created
March 24, 2016

Layout Name
CL2977 280 Forest GR Crawl

Description
Caviness Land
CL2977 280 Forest GR Crawl

Designer
Kyle Militzer

Revised
May 26, 2022

2nd Floor

Design Method	ASD (USA)
Building Code	IRC 2012

Floor

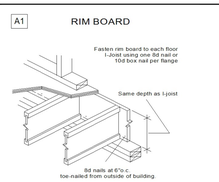
Loads	
Live	40
Dead	10
Deflection Joist	
LL Span L/	480
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Flush Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Dropped Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Header	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	
Decking	OSB 23/32 APA Rated Sturd-I-Floor
Fastener	Nailed & Glued

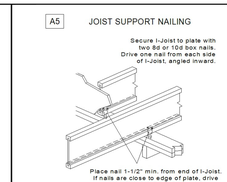
Legend

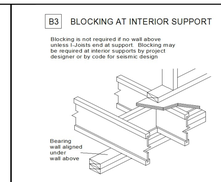
WS	Web Stiffener
-WS	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
	Load From Above
	Exterior Bearing Wall
	Interior Bearing Wall
	Non-Bearing Wall
	LP OSB/LSL Rim (Color Varies)
	LPI 18/20 I Joist
	LPI 32 I Joist
	LPI 42/56 I Joist
	Triforce/Open Joist (Color Varies)
	Bailey ProJoist TE Truss
	Dropped Beam (Color Varies By Product)
	Flush Beam (Color Varies By Product)
	Field Framed Pony Wall
	Column

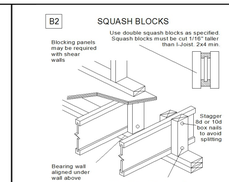
CSD DRAW DESIGN BUILD

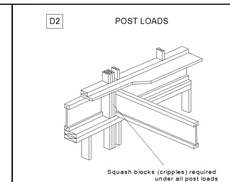
isPlan

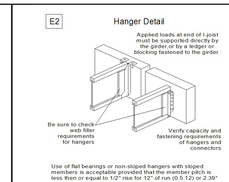


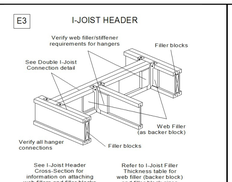


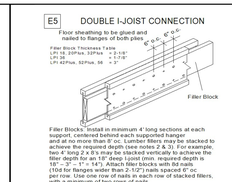


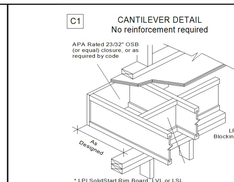


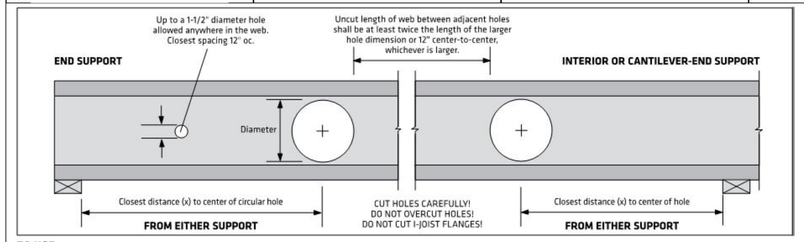












TO USE:

1. Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4. Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Diameter column gives the minimum distance from the inside face of bearing to the center of a circular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support – Hole Diameter						Distance from Interior or Cantilever-End Support – Hole Diameter					
		2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
	18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
	22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
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1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
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4. The maximum hole depth for circular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI joists.
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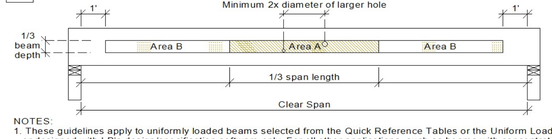

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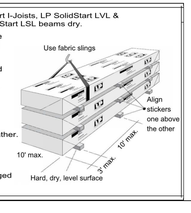
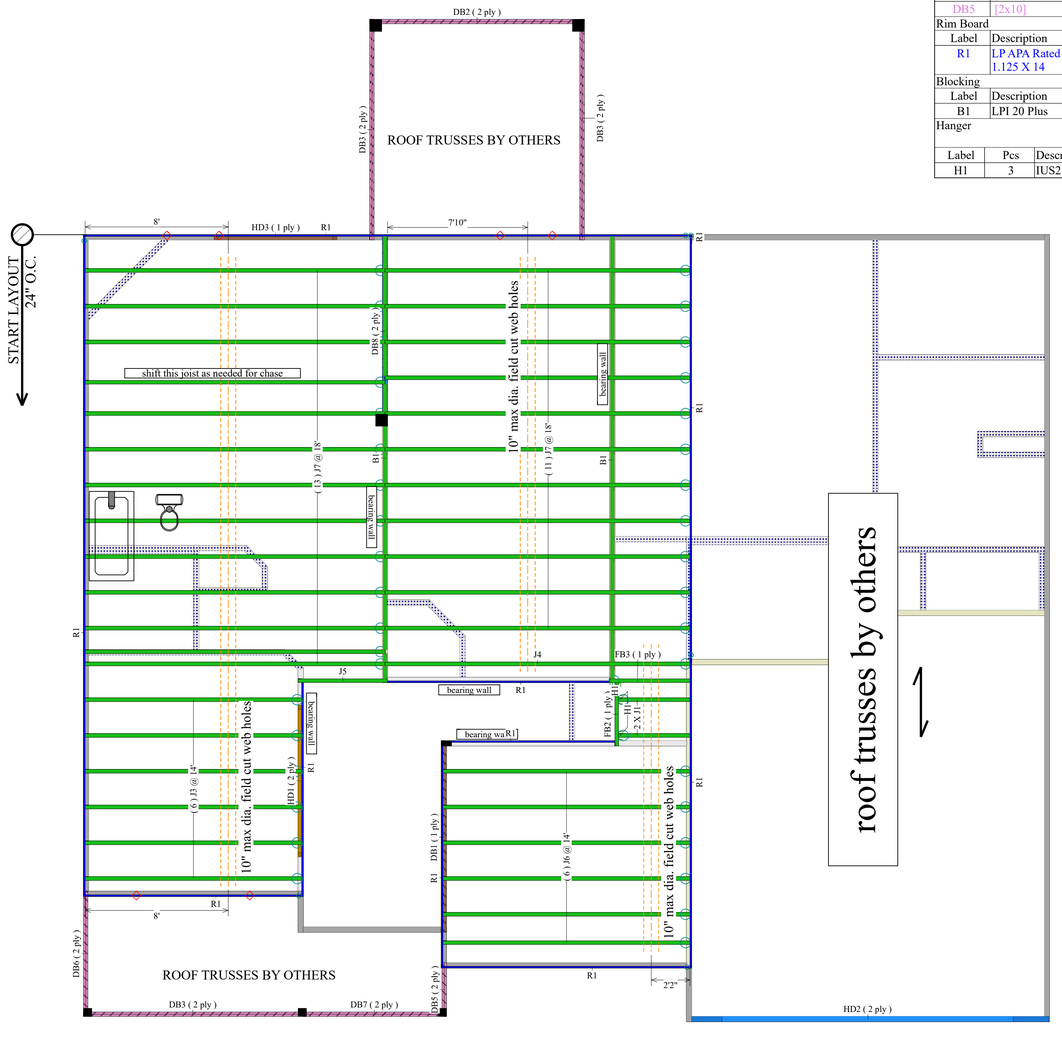
- Use forklifts and cranes carefully to avoid damaging product.
- Do not use visually damaged product. Call your local LP SolidStart Engineered Wood Products distributor for assistance when damaged products are encountered.





2nd Floor
I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB3	LPI 20Plus	2.5	14			1	6-0-0
FB2	LPI 20Plus	2.5	14			1	4-0-0
J7	LPI 20Plus	2.5	14			24	18-0-0
J4	LPI 20Plus	2.5	14			1	18-0-0
J6	LPI 20Plus	2.5	14			6	14-0-0
J3	LPI 20Plus	2.5	14			6	14-0-0
J5	LPI 20Plus	2.5	14			1	6-0-0
J1	LPI 20Plus	2.5	14			2	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB1	LP-LSL 1.55E	3.5	9.25			1	12-0-0
HD3	LP-LSL 1.55E	3.5	9.25			1	8-0-0
DB8	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	12-0-0
HD2	LP-LVL 2900Fb-2.0E	1.75	16	1	2	2	22-0-0

Beam By Others (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB3	{2x10}			3	2	6	14-0-0
DB2	{2x10}			1	2	2	12-0-0
HD1	{2x10}			1	2	2	10-0-0
DB7	{2x10}			1	2	2	10-0-0
DB6	{2x10}			1	2	2	8-0-0
DB5	{2x10}			1	2	2	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	LP APA Rated OSB 1.125 X 14	1.125	14			16	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
B1	LPI 20 Plus	2.5	14	LinFt		Varies	45-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	3	IUS2.56/14 (Min)			12 10dx1 1/2	

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Duluth, GA 30097
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LP BUILDING PRODUCTS

84 LUMBER Build on what we know™

Dealer
84 Lumber-Fayetteville #2307

Dealer Address
620 Belt Road
Fayetteville, NC 28301
(910) 867-9185

Project
CL2977 GR CP

Created
March 24, 2016

Layout Name
CL2977 GR CP

Description
Caviness Land
CL2977 GR CP

Designer
Kyle Militzer

Revised
February 18, 2020

2nd Floor

Design Method	ASD (USA)
Building Code	IRC 2012

Floor

Loads	
Live	40
Dead	10
Deflection Joist	
LL Span L/	480
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	
Decking	OSB 23/32 APA Rated Sturd-I-Floor
Fastener	Nailed & Glued

Legend

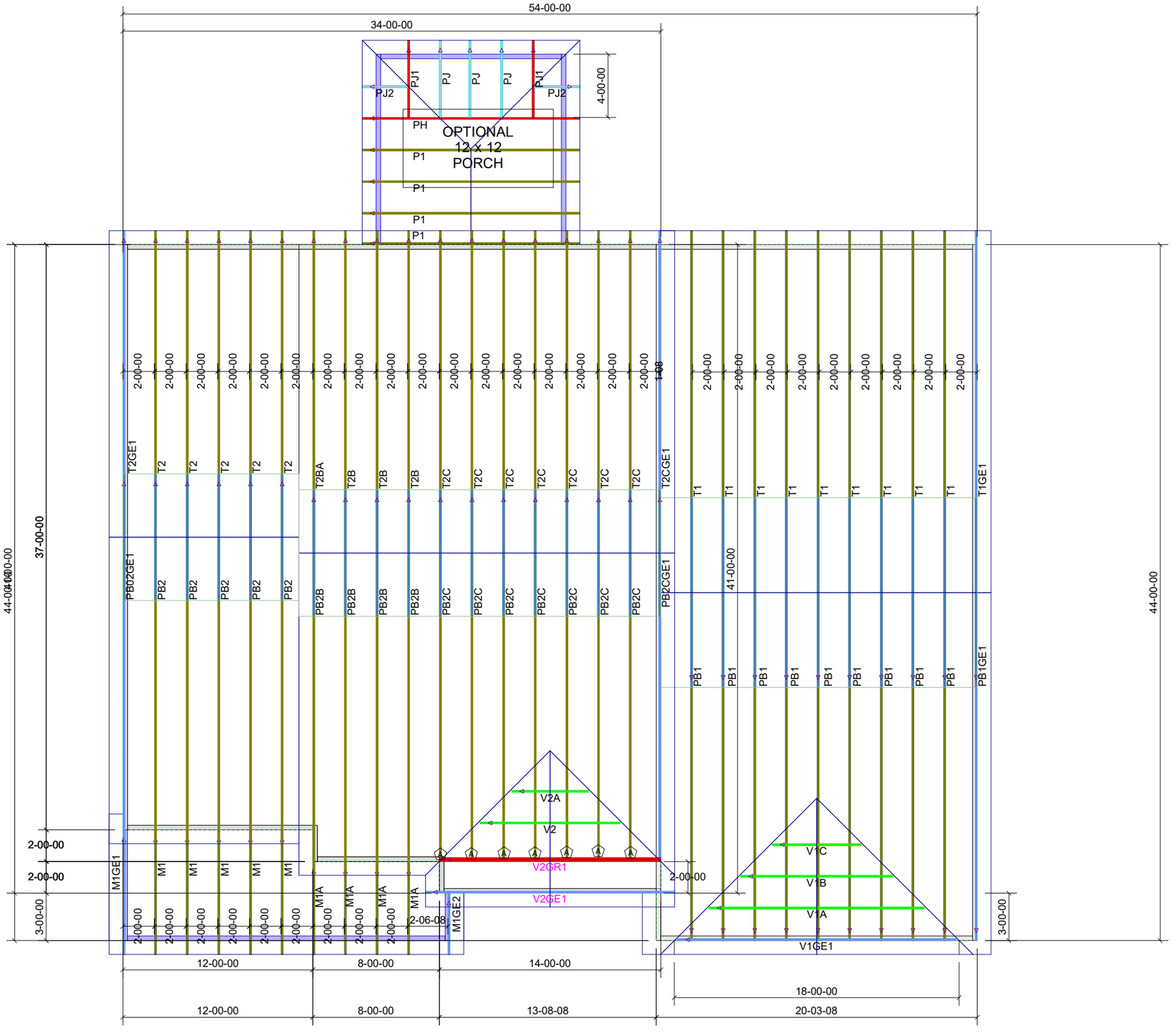
- Load from Above
- 2x4 Ext Wall
- 2x4 Brg Wall
- 2x4 Non-Brg Wall
- 2x6 Non-Brg Wall
- Wall Opening
- LP APA Rated OSB 1.125 X 14
- LPI 20Plus 14
- LP-LSL 1.55E 3.5 X 9.25 (Dropped)
- LP-LVL 2900Fb-2.0E 1.75 X 9.25 (Dropped)
- LP-LVL 2900Fb-2.0E 1.75 X 16 (Dropped)
- 1.5 X 9.25 (Dropped)

2ND FLOOR FRAMING

SCALE: 1/4" = 1'

Calculated Structured Designs

THIS LAYOUT IS INTENDED FOR THE PURPOSE OF TRUSS LOCATION AND PLACEMENT ONLY. REFER TO THE BUILDING PLANS FOR ACTUAL BUILDING CONSTRUCTION.



1st Level Roof Area	2nd Level Roof Area
1504.09	1759.89

84 LUMBER COMPONENTS

DEDICATED TO QUALITY AND EXCELLENCE
200 EMMETT ROAD
DUNN, NORTH CAROLINA 28334
PHONE: 910-892-8400

PROJECT: Master CL 2977 CP

CUSTOMER: Caviness Land Development

MODEL: CL 2977 CP

QUOTE #: 1800894

PRINT DATE: 4/25/2018

DRAWN BY: Rodney Evans

SCALE: N.T.S

TOP LIVE LOAD: 20.0 lb/ft²

TOP DEAD LOAD: 10.0 lb/ft²

BOTTOM DEAD LOAD: 10.0 lb/ft²

WIND SPEED: 115 mph

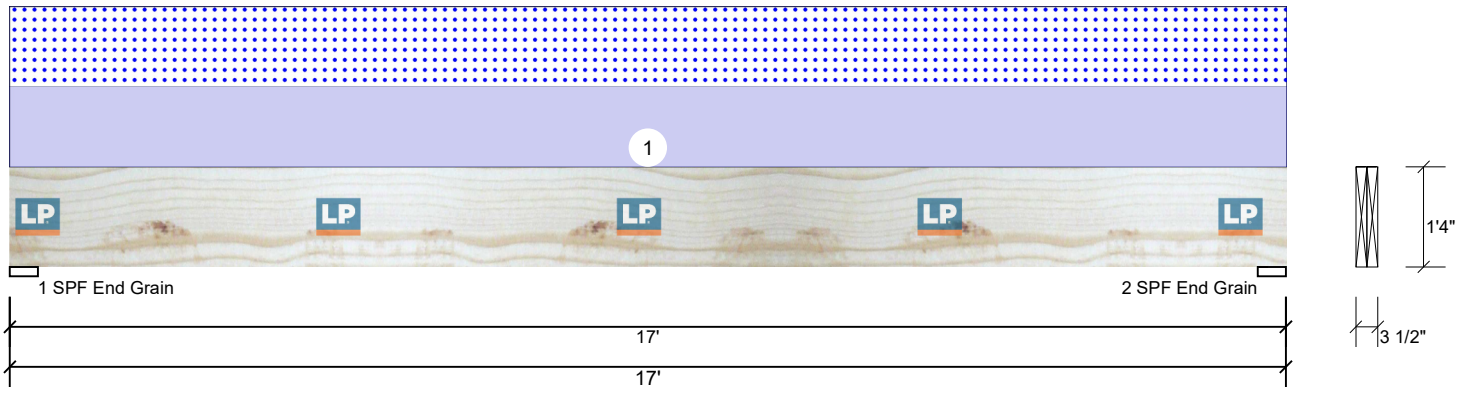
GENERAL NOTES:

- DO NOT CUT OR MODIFY TRUSSES
- TRUSSES ARE SPACED 24" ON CENTER UNLESS OTHERWISE NOTED
- REFER TO THE INDIVIDUAL TRUSS DESIGN DRAWINGS FOR THE LOCATION OF LATERAL BRACING AND MULTI-PLY CONNECTION REQUIREMENTS.
- PER ANSI TPI 1-2002 THE TRUSS ENGINEER IS RESPONSIBILE FOR TRUSS TO TRUSS CONNECTIONS AND TRUSS PLY TO PLY CONNECTIONS. THIS TRUSS PLACEMENT PLAN RECOMMENDS TRUSS TO BEARING CONNECTIONS AND TRUSS TO BEAM CONNECTIONS WHICH SHALL BE REVIEWED BY THE BUILDING DESIGNER. IT IS THE RESPONSIBILITY OF THE BUILDING DESIGNER TO RESOLVE ALL ROOF FORCES ADEQUATELY TO THE FOUNDATION.

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

HD2-A LP-LVL 2900Fb-2.0E 1.750" X 16.000" 2-Ply - PASSED

Level: 2nd Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	3961	3825	0	0
2	0	3961	3825	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	66%	3961 / 3825	7786	L	D+S
2 - SPF End Grain	4.500"	66%	3961 / 3825	7786	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	30781 ft-lb	8'6"	39831 ft-lb	0.773 (77%)	D+S	L
Shear	6288 lb	1'7 5/8"	12236 lb	0.514 (51%)	D+S	L
LL Defl inch	0.337 (L/583)	8'6 1/16"	0.547 (L/360)	0.620 (62%)	S	L
TL Defl inch	0.687 (L/287)	8'6 1/16"	0.820 (L/240)	0.840 (84%)	D+S	L

Design Notes

1. Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2. Dead Load Deflection: Instant = 0.349", Long Term = 0.524"
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 must be laterally braced at a maximum of 4'2 1/4" o.c.
7. Bottom 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	Part. Uniform	0-0-0 to 17-0-0		Top	450 PLF	0 PLF	450 PLF	0 PLF	0 PLF	
	Self Weight				16 PLF					

Notes

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This design is valid until 10/31/2021

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

US Lumber
2160 Satellite Blvd, Suite 450, GA 30097
888-613-5078

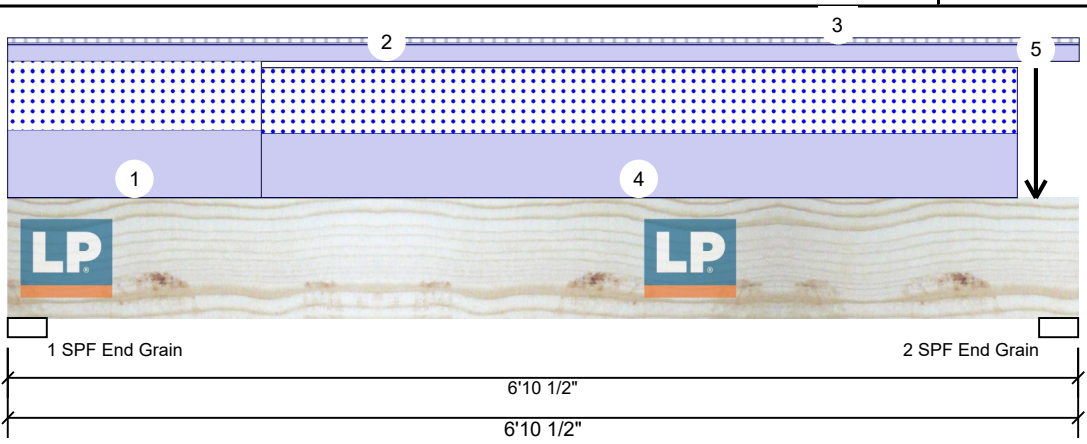
U.S. LUMBER

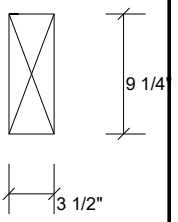
CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

HD3-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Floor





Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	100	1742	1342	0	0
2	100	2155	1755	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	34%	1742 / 1342	3084	L	D+S
2 - SPF End Grain	3.000"	43%	2155 / 1755	3909	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4691 ft-lb	3'5 5/16"	11647 ft-lb	0.403 (40%)	D+S	L
Shear	2296 lb	5'11"	10177 lb	0.226 (23%)	D+S	L
LL Defl inch	0.053 (L/1477)	3'5 1/4"	0.217 (L/360)	0.240 (24%)	S	L
TL Defl inch	0.121 (L/642)	3'5 1/4"	0.325 (L/240)	0.370 (37%)	D+S	L

Design Notes

1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2 Dead Load Deflection: Instant = 0.069", Long Term = 0.103"
3 Girders are designed to be supported on the bottom edge only.
4 Top braced at bearings.
5 Bottom 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	Part. Uniform	0-0-0 to 1-7-9		Top	400 PLF	0 PLF	400 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 6-10-8		Top	96 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Top	10 PLF	29 PLF	0 PLF	0 PLF	0 PLF	
	End	6-10-8			10 PLF	29 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	1-7-9 to 6-5-12		Top	380 PLF	0 PLF	380 PLF	0 PLF	0 PLF	
5	Point	6-7-4		Top	602 lb	0 lb	602 lb	0 lb	0 lb	Header Column
	Bearing Length	0-3-8								
	Self Weight				10 PLF					

Notes

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US Lumber
2160 Satellite Blvd, Suite 450, GA 30097
888-613-5078

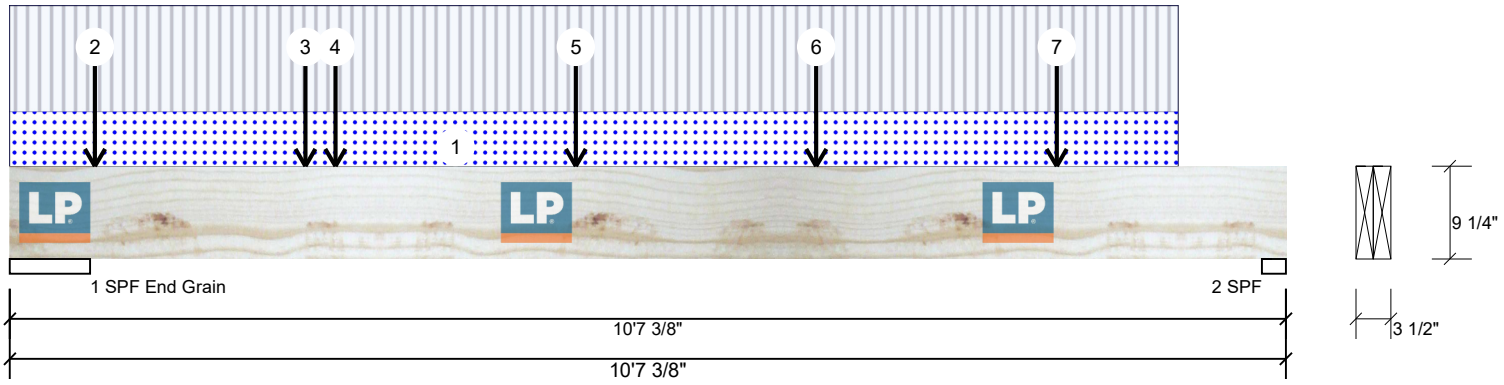
U.S. LUMBER

CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB8-A LP-LVL 2900Fb-2.0E 1.750" X 9.250" 2-Ply - PASSED

Level: 2nd Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	3031 (-138)	611	0 (-72)	0	0
2	2147 (-105)	443	0 (-55)	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	8.000"	17%	611 / 3031	3642	L	D+L
2 - SPF	2.375"	73%	443 / 2147	2591	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7469 ft-lb	4'8 1/2"	12416 ft-lb	0.602 (60%)	D+L	L
Shear	2604 lb	1'4 1/2"	6151 lb	0.423 (42%)	D+L	L
LL Defl inch	0.257 (L/460)	5'6 3/8"	0.329 (L/360)	0.780 (78%)	L	L
TL Defl inch	0.310 (L/383)	5'6 3/8"	0.494 (L/240)	0.630 (63%)	D+L	L

Design Notes

1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2 Dead Load Deflection: Instant = 0.052", Long Term = 0.078"
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 braced at bearings.
7 Bottom 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	Part. Uniform	0-0-0 to 9-8-8		Top	0 PLF	-25 PLF	-13 PLF	0 PLF	0 PLF	
2	Point	0-8-8		Top	181 lb	1004 lb	0 lb	0 lb	0 lb	J2 J7
	Bearing Length	0-3-8								
3	Point	2-5-8		Top	167 lb	527 lb	0 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8								
4	Point	2-8-8		Top	25 lb	512 lb	0 lb	0 lb	0 lb	J2
	Bearing Length	0-3-8								

Continued on page 2...

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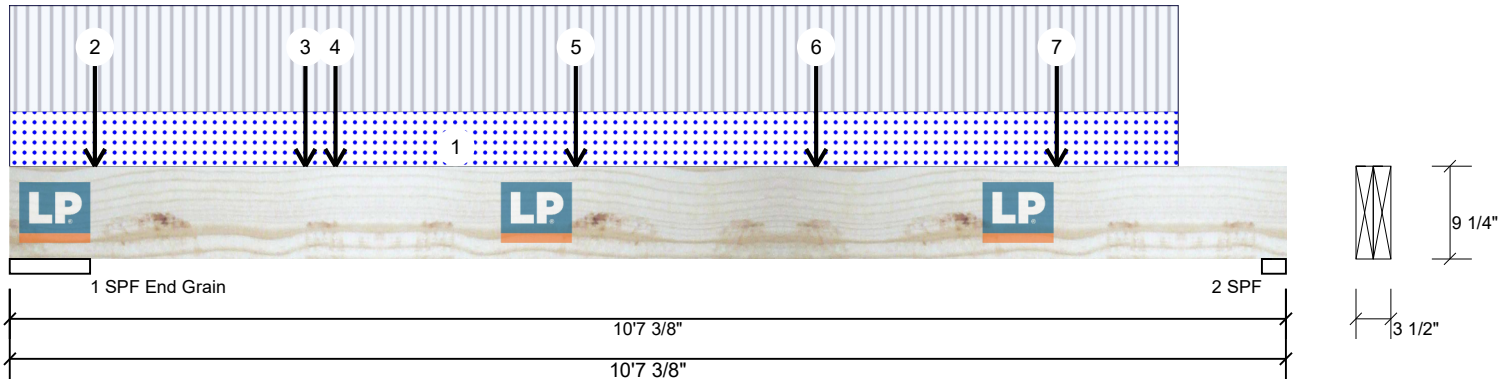
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB8-A LP-LVL 2900Fb-2.0E 1.750" X 9.250" 2-Ply - PASSED

Level: 2nd Floor



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ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
5	Point	4-8-8		Top	202 lb	1071 lb	0 lb	0 lb	0 lb	J7 J2
	Bearing Length	0-3-8								
6	Point	6-8-8		Top	192 lb	1038 lb	0 lb	0 lb	0 lb	J7 J2
	Bearing Length	0-3-8								
7	Point	8-8-8		Top	189 lb	1026 lb	0 lb	0 lb	0 lb	J7 J2
	Bearing Length	0-3-8								
	Self Weight				9 PLF					

Notes

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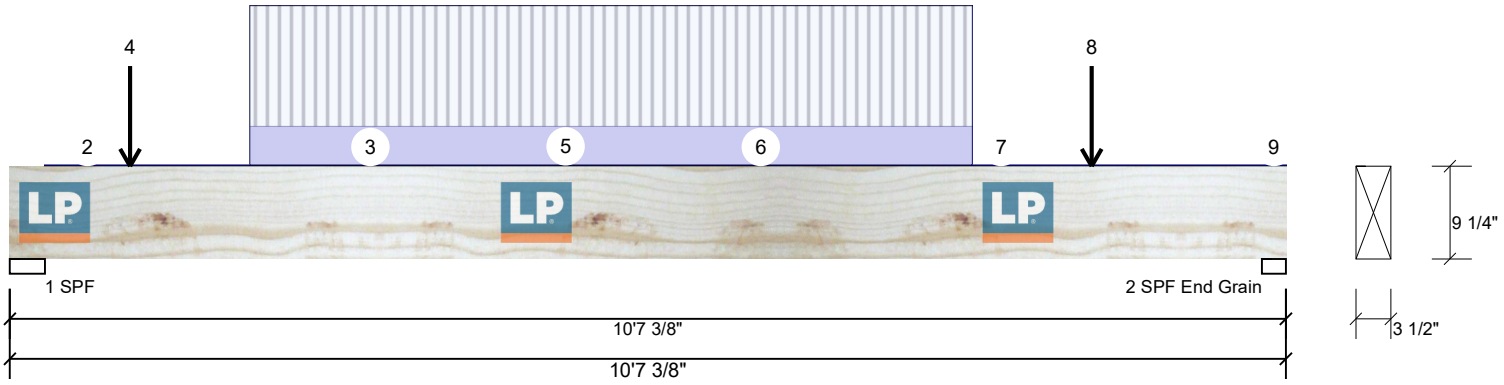
CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB1-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1059	408	0	0	0
2	934	365	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	28%	408 / 1059	1467	L	D+L
2 - SPF End Grain	2.375"	18%	365 / 934	1299	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3686 ft-lb	5'4 1/8"	10127 ft-lb	0.364 (36%)	D+L	L
Shear	1456 lb	1'	8849 lb	0.165 (16%)	D+L	L
LL Defl inch	0.153 (L/805)	5'4 1/4"	0.342 (L/360)	0.450 (45%)	L	L
TL Defl inch	0.212 (L/581)	5'4 1/4"	0.512 (L/240)	0.410 (41%)	D+L	L

Design Notes

1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2 Dead Load Deflection: Instant = 0.059", Long Term = 0.088"
3 Girders are designed to be supported on the bottom edge only.
4 Top braced at bearings.
5 Bottom 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
2	Tapered Start	0-3-8		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	1-0-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
3	Tapered Start	1-0-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	5-0-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
4	Point	1-0-0		Top	122 lb	366 lb	0 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8								
5	Part. Uniform	2-0-0 to 8-0-0		Top	69 PLF	206 PLF	0 PLF	0 PLF	0 PLF	
6	Tapered Start	5-0-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	7-5-15			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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U.S. LUMBER

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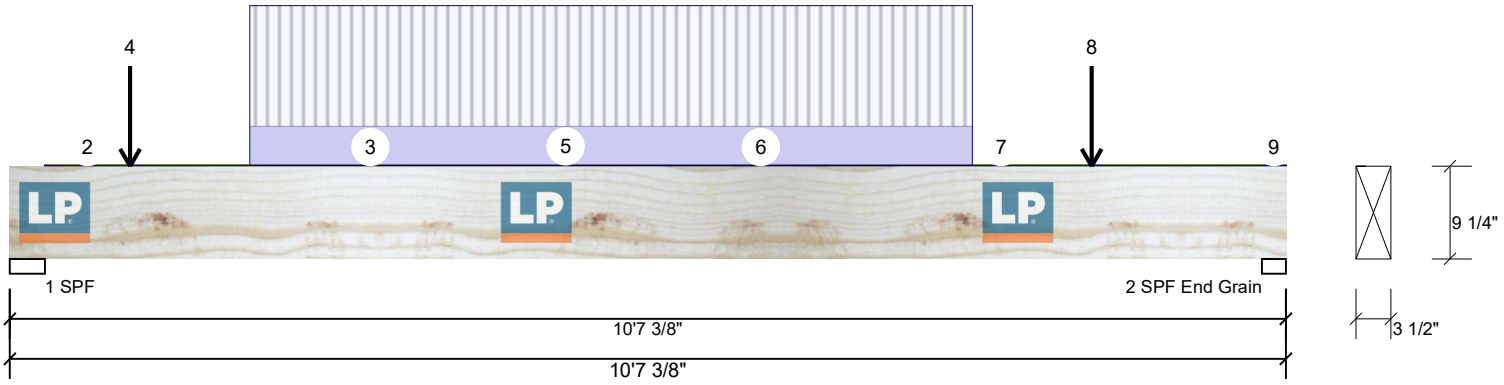
DB1-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Floor



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ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
7	Tapered Start	7-5-15		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	10-5-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
8	Point	9-0-0		Top	127 lb	381 lb	0 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8								
9	Tapered Start	10-5-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	10-7-6			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF					

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

This design is valid until 10/31/2021

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

US Lumber
2160 Satellite Blvd, Suite 450, GA 30097
888-613-5078

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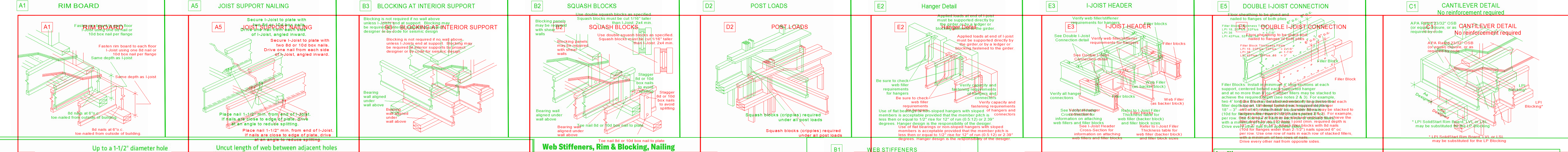
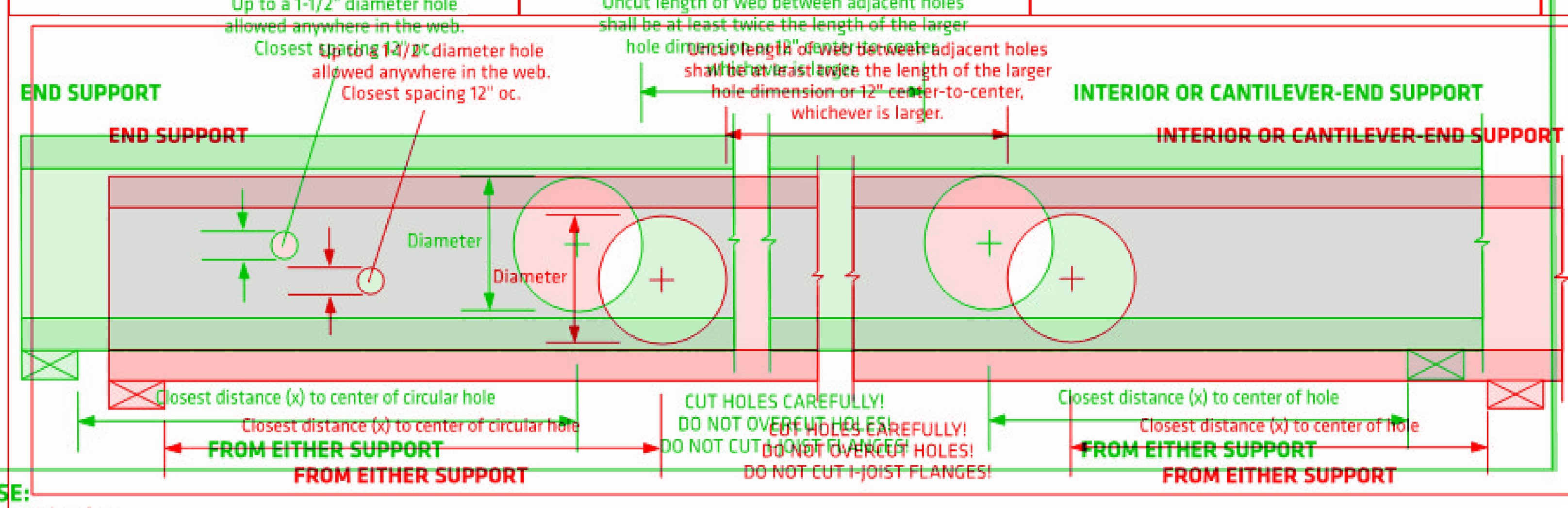
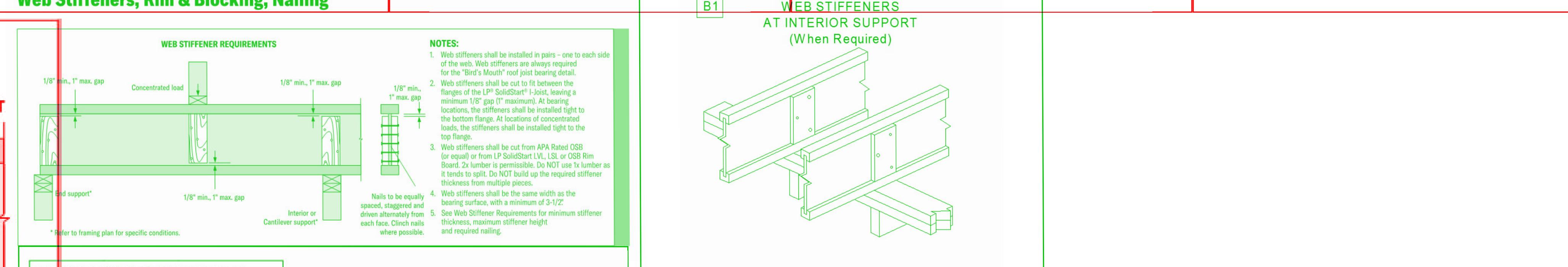
CSD DRAW DESIGN BUILD







TO USE:

1. Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4. Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Diameter column gives the minimum distance from the inside face of bearing to the center of a circular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support – Hole Diameter 2"	4"	6"	8"	10"	12"	Distance from Interior or Cantilever-End Support – Hole Diameter 2"	4"	6"	8"	10"	12"
14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	1'-0"	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
	18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	1'-8"	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
	22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	4'-2"	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
	26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	6'-8"	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-
16"	18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"
	22'	1'-4"	2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"
	26'	3'-6"	4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"
	30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"

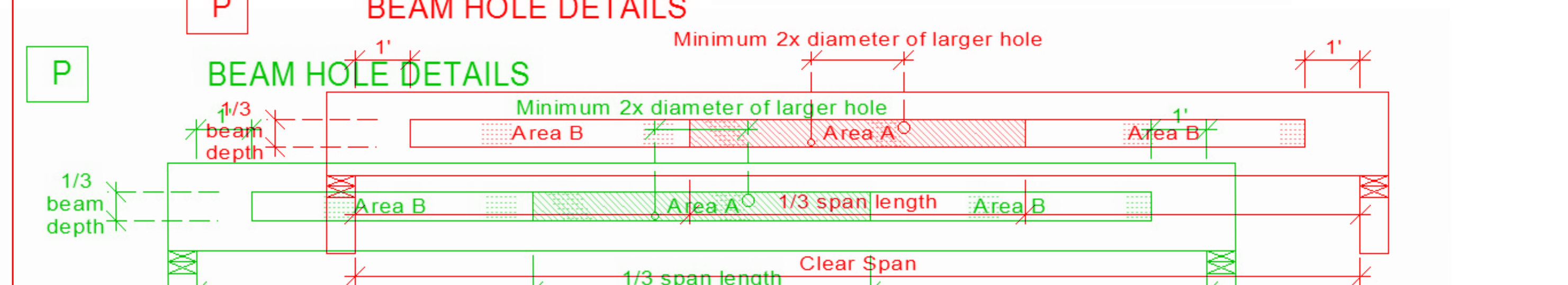
DESIGN ASSUMPTIONS:

1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
3. Clear Span has not been verified for these joists and is shown for informational purposes only! Verify that the joist selected will work for the span and loading conditions needed before checking hole location.
4. The maximum hole depth for circular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI joists.
5. Holes cannot be located in the span where designated "-", without further analysis by a design professional.

NOTES:

1. Holes may be placed anywhere within the depth of the joist. A minimum 1/4" clear distance is required between the hole and the flanges.
2. Round holes up to 1-1/2" diameter may be placed anywhere in the web.
3. Perforated "knockouts" may be neglected when locating web holes.
4. Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
5. Multiple holes shall have a clear separation along the length of the joist of at least twice the length of the larger adjacent hole, or a minimum of 12" center-to-center, whichever is greater.
6. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes aligned parallel to the joist length may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangle or an 8" diameter round hole are acceptable for the joist depth at that location and completely encompass the holes.
7. For conditions not covered in this table, use LP's design software or contact your local LP® SolidStart® Engineered Wood Products distributor for more information.

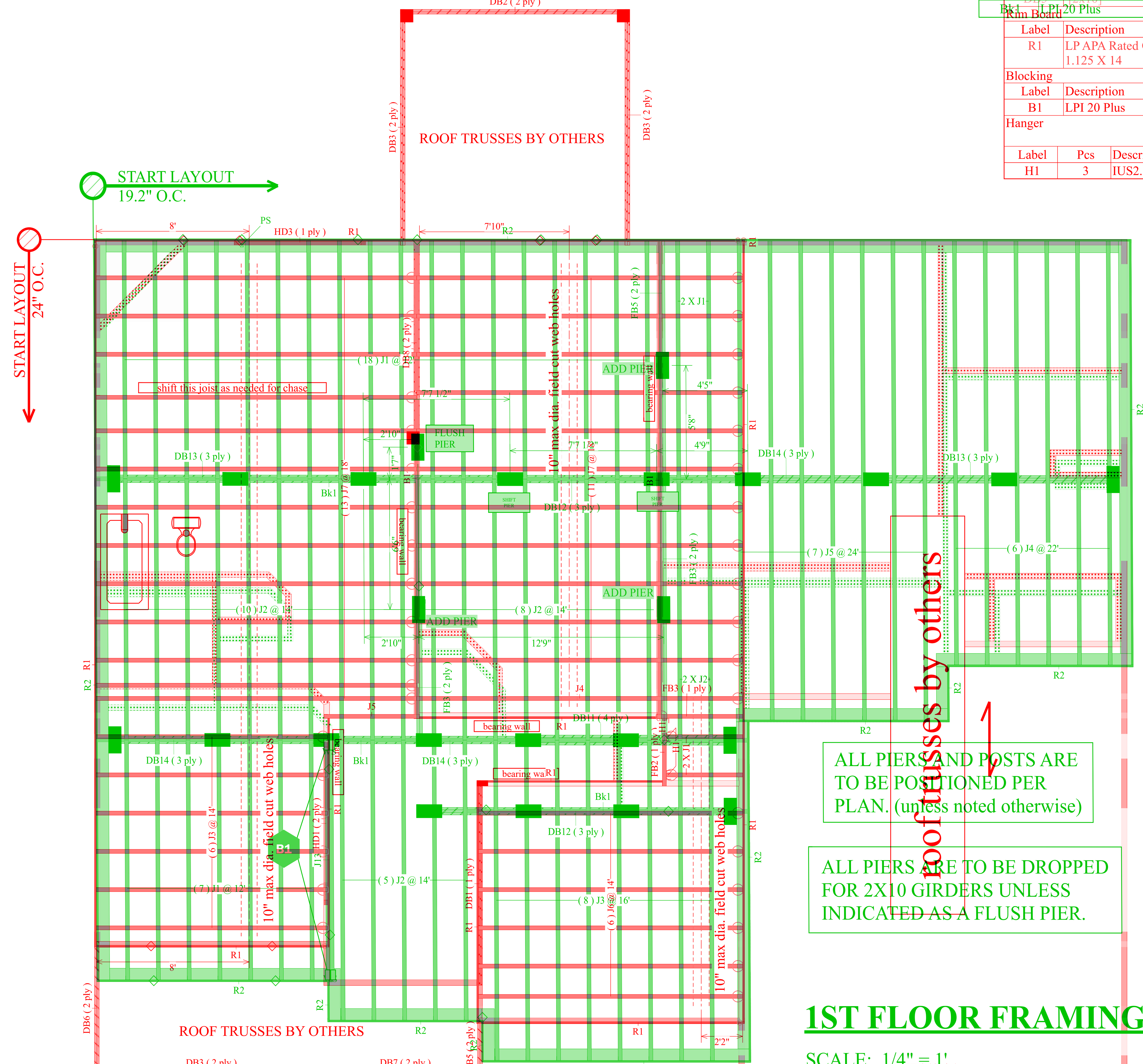
P BEAM HOLE DETAILS



NOTES:
1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Load Tables or the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP® SolidStart® Engineered Wood Products distributor for assistance.
7. Protect plumbing holes from moisture.

Important Notes — WARNING: Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

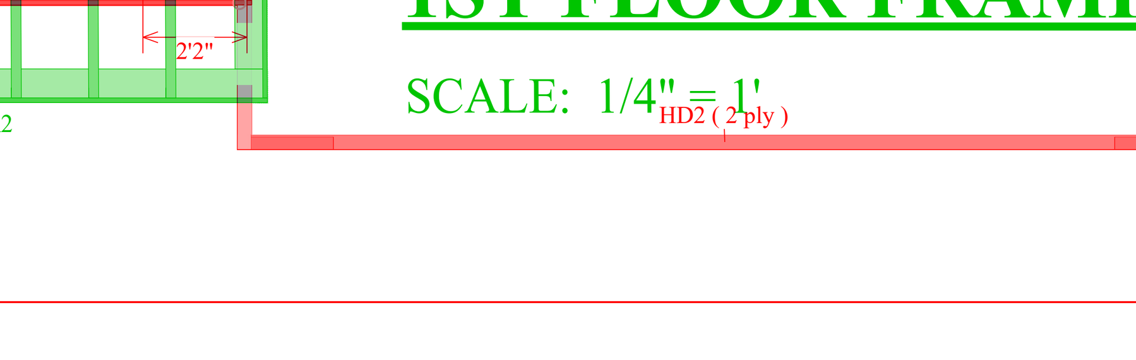
Handling & Storage — Keep LP SolidStart I-Joists, LP SolidStart LVL & LP SolidStart LSL beams dry.



1ST FLOOR FRAMING

2ND FLOOR FRAMING

SCALE: 1/4" = 1'



1st Floor

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20Plus	2.5	11.875			7	24-0-0
J4	LPI 20Plus	2.5	11.875			6	22-0-0
J3	LPI 20Plus	2.5	11.875			8	16-0-0
J2	LPI 20Plus	2.5	11.875			25	14-0-0
J13	LPI 20Plus	2.5	11.875	1	2	2	12-0-0
J1	LPI 20Plus	2.5	11.875			27	12-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB3	LP-LVL 2900Fb-2.0E	1.75	11.875	2	2	4	14-0-0
[illegible]	LP-LVL 2900Fb-2.0E	1.75	11.875	1	2	2	12-0-0

Beam By Others (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB12	[2x10]			2	3	6	16-0-0
DB13	[2x10]			2	3	6	14-0-0
DB14	[2x10]			3	3	9	12-0-0
DB11	[2x10]			1	4	4	12-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R2	LP APA Rated OSB 1.125 X 11.875	1.125	11.875			16	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
Bk1	LPI 20 Plus	2.5	11.875	LinFt		Varies	71-0-0

2nd Floor

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB3	LPI 20Plus	2.5	14			1	6-0-0
FB2	LPI 20Plus	2.5	14			1	4-0-0
J7	LPI 20Plus	2.5	14			24	18-0-0
J4	LPI 20Plus	2.5	14			1	18-0-0
J6	LPI 20Plus	2.5	14			6	14-0-0
[illegible]	LPI 20Plus	2.5	14			6	14-0-0
J5	LPI 20Plus	2.5	14			1	6-0-0
J1	LPI 20Plus	2.5	14			2	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB1	LP-LSL 1.55E	3.5	9.25			1	12-0-0
HD3	LP-LSL 1.55E	3.5	9.25			1	8-0-0
DB8	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	12-0-0
HD2	LP-LVL 2900Fb-2.0E	1.75	16	1	2	2	22-0-0

Beam By Others (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB3	[2x10]			3	2	6	14-0-0
DB2	[2x10]			1	2	2	12-0-0
HD1	[2x10]			1	2	2	10-0-0
DB7	[2x10]			1	2	2	10-0-0
DB6	[2x10]			1	2	2	8-0-0
DB5	[2x10]			1	2	2	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	LP APA Rated OSB 1.125 X 14	1.125	14			16	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
B1	LPI 20 Plus	2.5	14	LinFt		Varies	45-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	3	IUS2.56/14 (Min)			12 10dx1 1/2	

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Dealer
84 Lumber-Fayetteville #2307
Dealer Address
620 Bell Road
Fayetteville, NC 28301
(910)867-9185
Project
CL2977 GR CP / CL2977 280 Forest GR Crawl
Created
March 24, 2016
Layout Name
CL2977 GR CP / CL2977 280 Forest GR Crawl
Description
Caviness Land
CL2977 GR CP / CL2977 280 Forest GR Crawl
Designer
Kyle Militzer
Revised
February 18, 2020 / May 26, 2022

2nd Floor

Design Method	ASD (USA)
Building Code	IRC 2012
Floor	
Loads	
Live	40
Dead	10
Deflection Joist	
LL Span L/	480
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	OSB
Decking	23/32 APA Rated Sturd-I-Floor
Fastener	Nailed & Glued

Legend
- Load from Above
- 2x4 Ext Wall
- 2x4 Brg Wall
- 2x4 Non-Brg Wall
- 2x6 Non-Brg Wall
- Wall Opening
- LP APA Rated OSB 1.125 X 14
- LPI 20Plus 14
- LP-LSL 1.55E 3.5 X 9.25 (Dropped)
- LP-LVL 2900Fb-2.0E 1.75 X 9.25 (Dropped)
- LP-LVL 2900Fb-2.0E 1.75 X 16 (Dropped)
- WS Web Stiffener
- PS Point Load Support
- Load From Above
- Exterior Bearing Wall
- Interior Bearing Wall
- Non-Bearing Wall
- LP OSB/LSL Rim (Color Varies)
- LPI 18/20 I Joist
- LPI 32 I Joist
- LPI 42/56 I Joist
- Triforce/Open Joist (Color Varies)
- Bailey Prodeck TE Truss
- Dropped Beam (Color Varies By Product)
- Flush Beam (Color Varies By Product)
- Field Framed Pony Wall

CSD DRAW DESIGN BUILD | isPlan