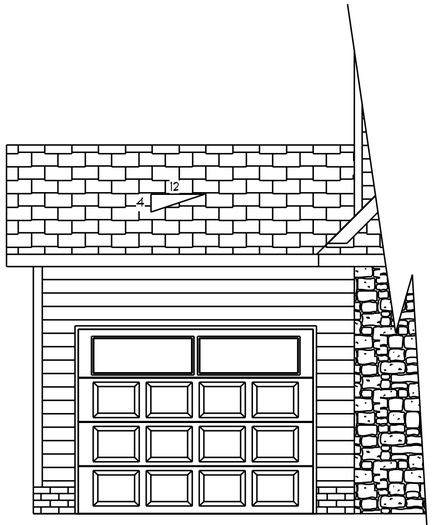
NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

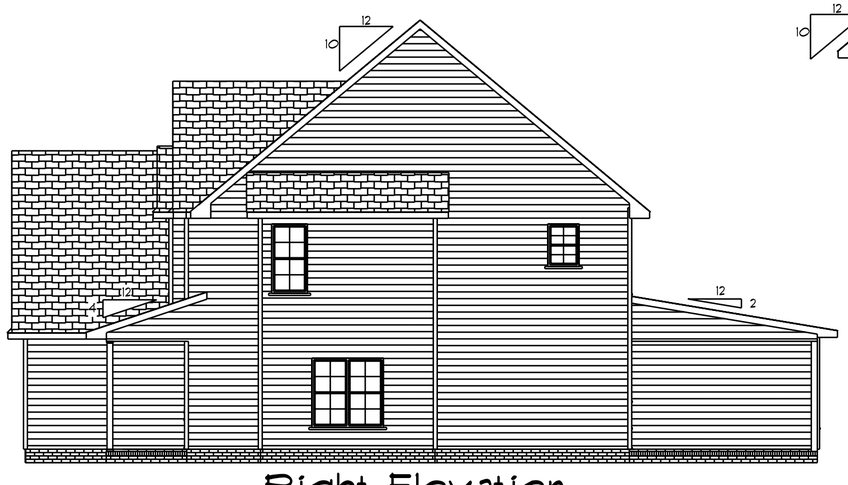
08/02/2021

Harnett COUNTY NORTH CAROLINA

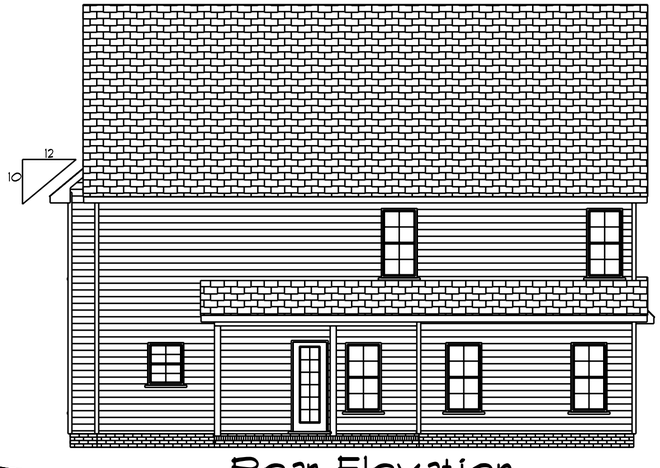


Opt. Garage

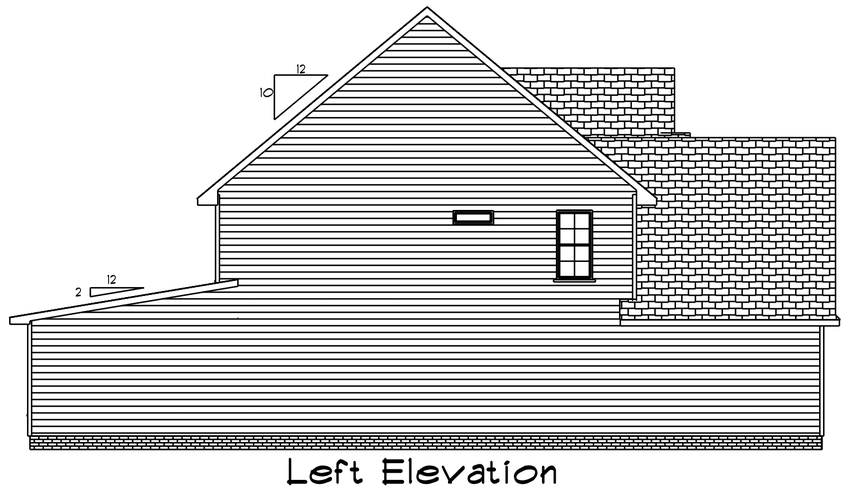
Front Elevation
Scale: 1/4"= 1'0"



Right Elevation
Scale: 1/8"= 1'0"



Rear Elevation
Scale: 1/8"= 1'0"

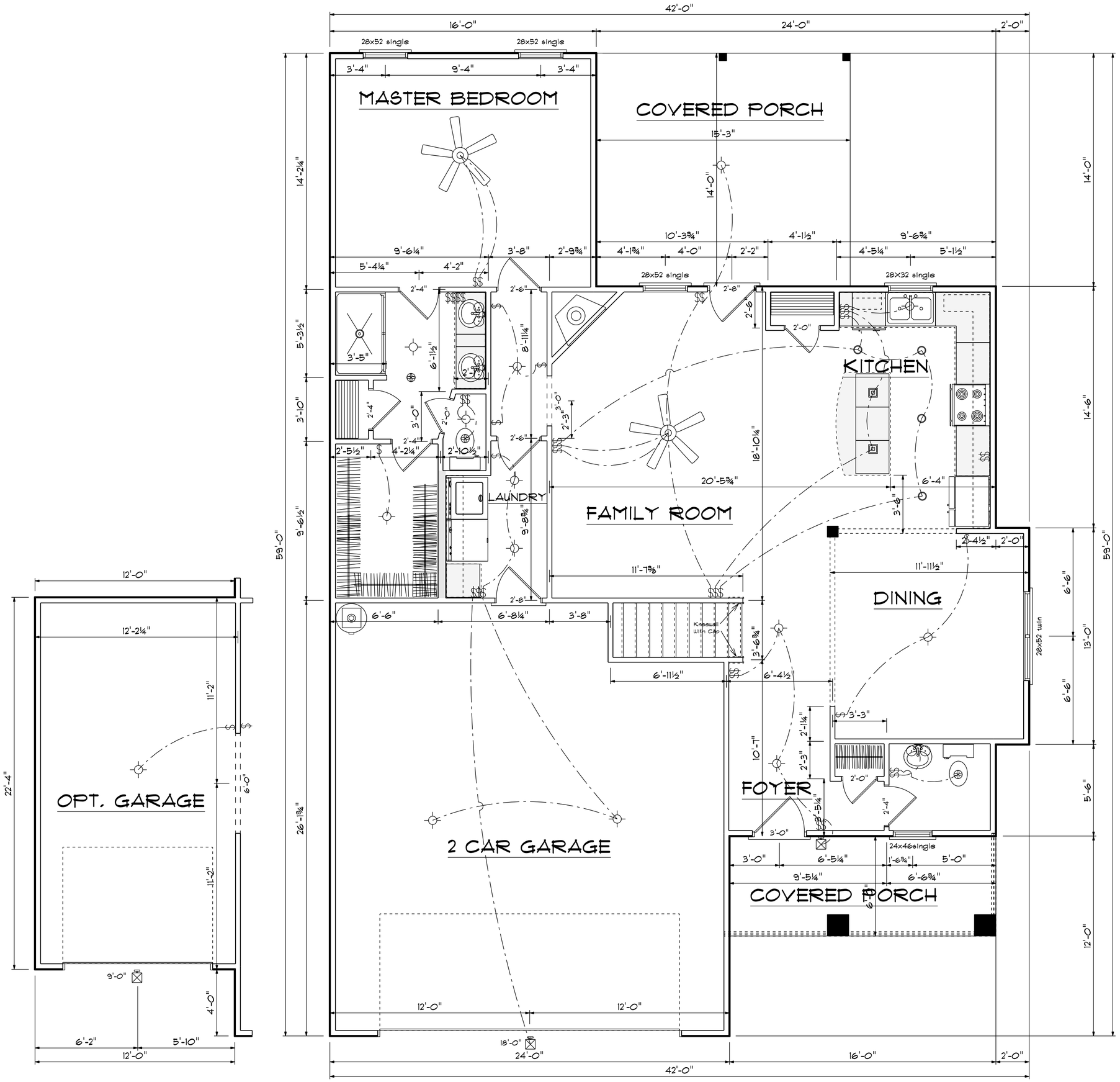


Left Elevation
Scale: 1/8"= 1'0"

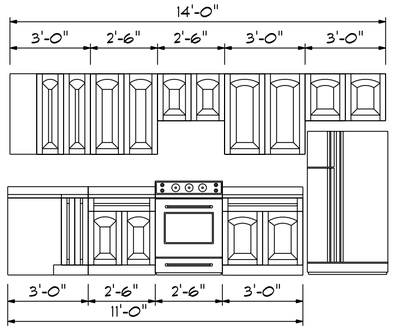
DATE: 1/23/2021
REVISED
DRAWING#

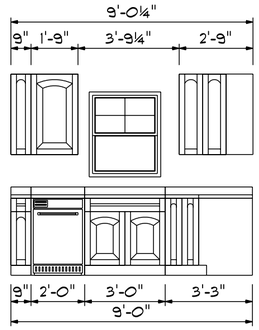
SCALE: 1/4"
DRAWN BY
APPROVED

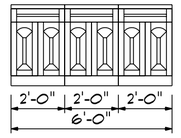
The Beaumont



Kitchen Cabinets







FIRST FLOOR OPENING SCHEDULE			
PRODUCT CODE	SIZE	HINGE	COUNT
36X80 COLONIAL A 1	3'-0"	L	1
32X80 FRENCH A 1	2'-8"	L	1
60X80 FRENCH A 2-MODIFIED	5'-0"	LN	1
192X84 - 8 PANEL GARAGE DOOR	18'-0"	U	1
2-0 Door Unit	2'-0"	L	2
2-4 Door Unit	2'-4"	R	3
2-4 Door Unit	2'-4"	L	1
2-6 Door Unit	2'-6"	R	1
2-6 Door Unit	2'-6"	L	1
2-8 Door Unit	2'-8"	R	1
24x46single	2'-4" x 4'-6"	N	1
28X32 single	2'-8" x 3'-2"	N	1
28x52 single	2'-8" x 5'-2"	N	3
28x52 twin	5'-4" x 5'-2"	NN	1
4X8 GLASS BLOCK	4'-0" x 4'-0"	N	1

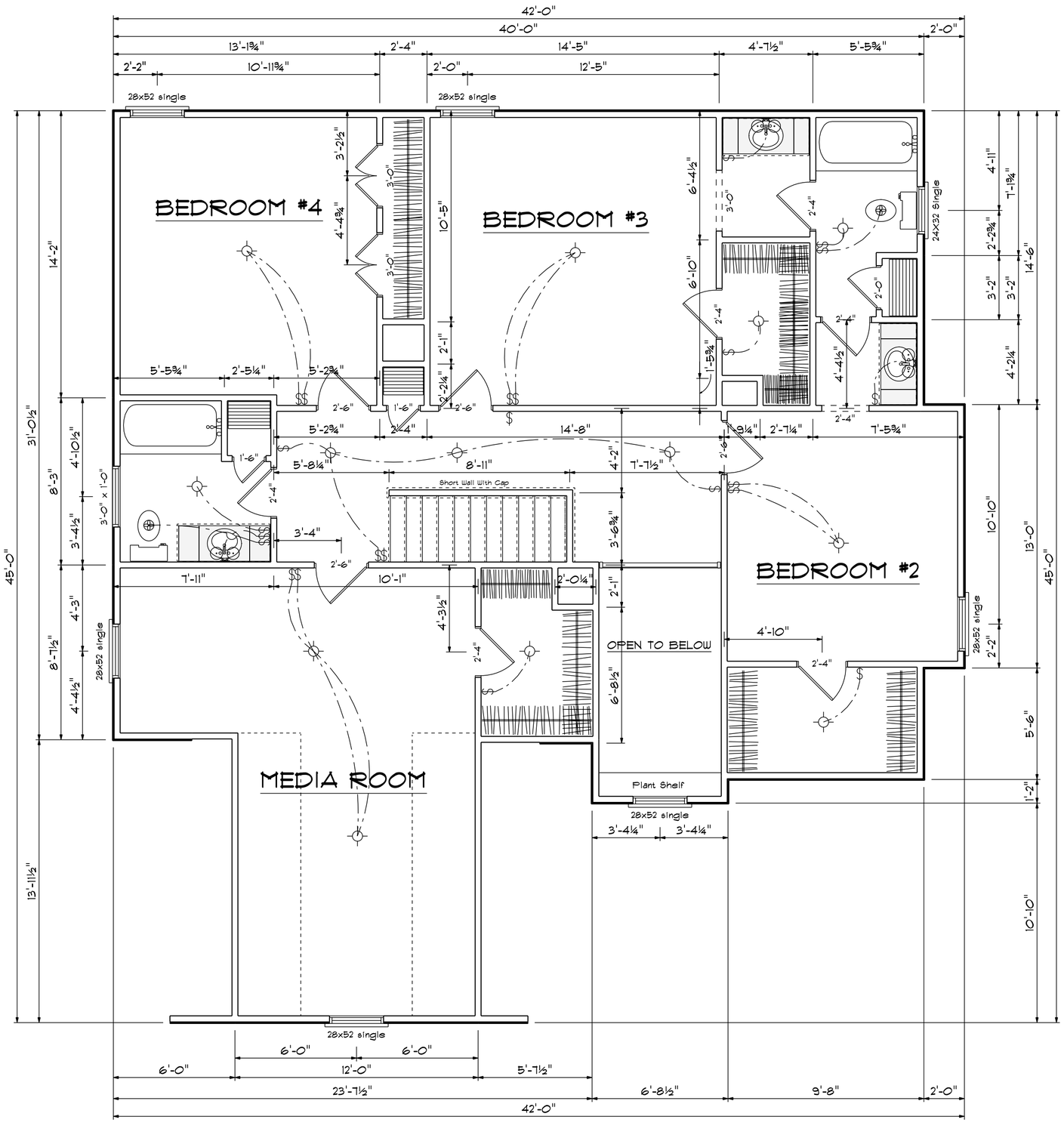
Areas

First Floor	1269
Second Floor	1378
Total Heated	2647
Garage	598
Front Porch	97
Rear Porch	214
Opt. Garage	268

DATE: 1/23/2021
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

The Beaumont



SECOND FLOOR OPENING SCHEDULE			
PRODUCT CODE	SIZE	HINGE	COUNT
1-6 Door Unit	1'-6"	L	2
2-0 Door Unit	2'-0"	L	1
2-4 Door Unit	2'-4"	R	3
2-4 Door Unit	2'-4"	L	3
2-6 Door Unit	2'-6"	R	1
2-6 Door Unit	2'-6"	L	3
3-0 Doublehung Door Unit	3'-0"	LR	2
24X32 Single	2'-4" x 3'-2"	N	1
28x52 single	2'-8" x 5'-2"	N	9
36X12 TRANSOM	3'-0" x 1'-0"	N	1

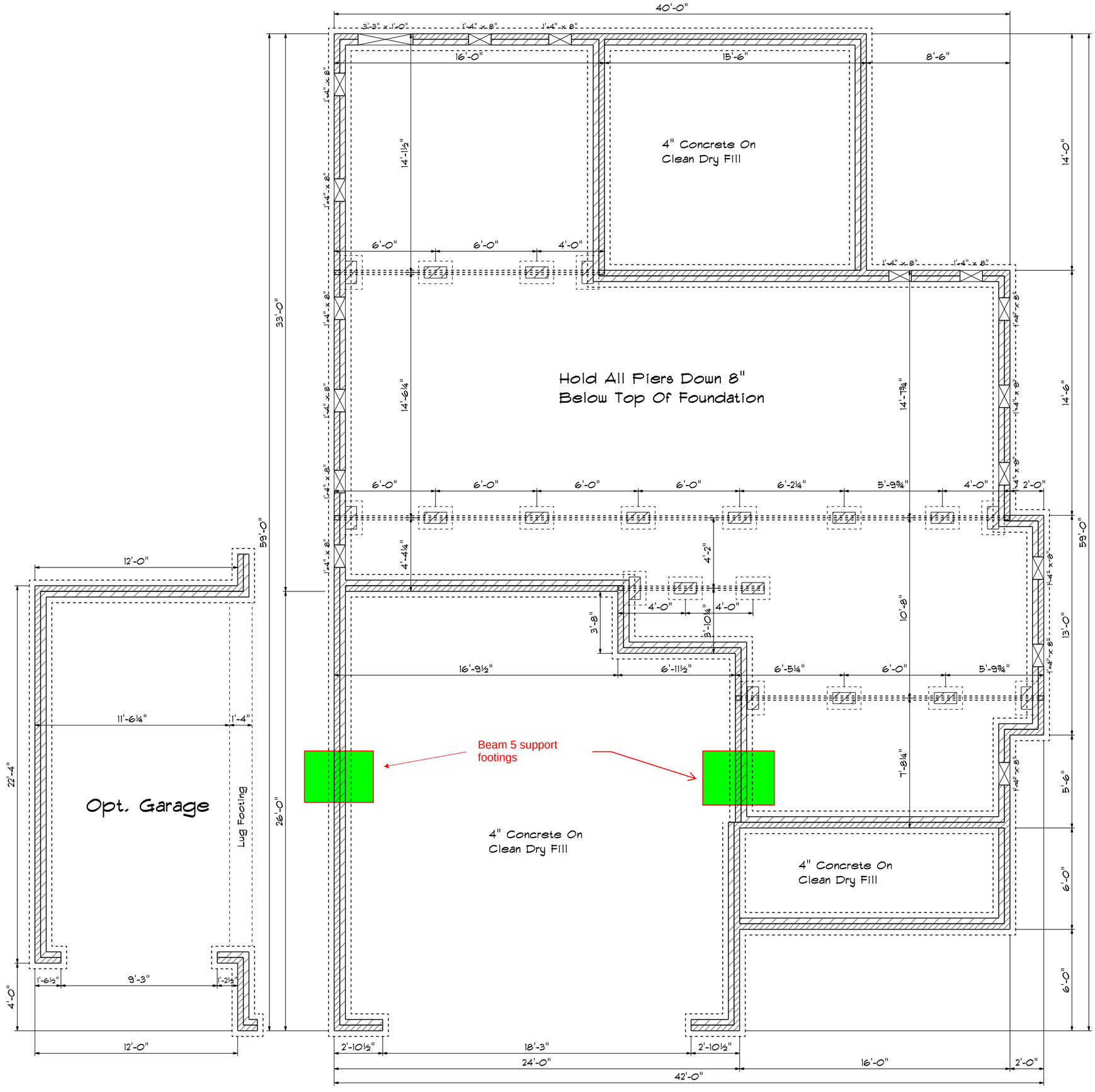
Second Floor Plan

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

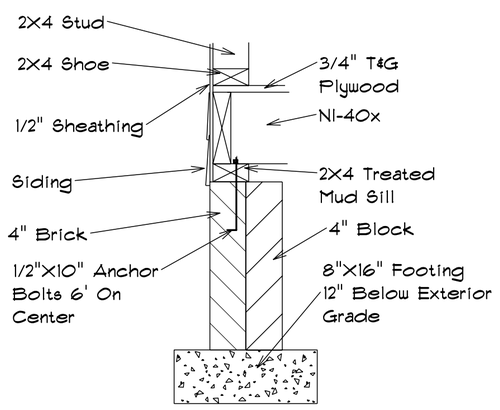
DATE: 1/23/2021
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

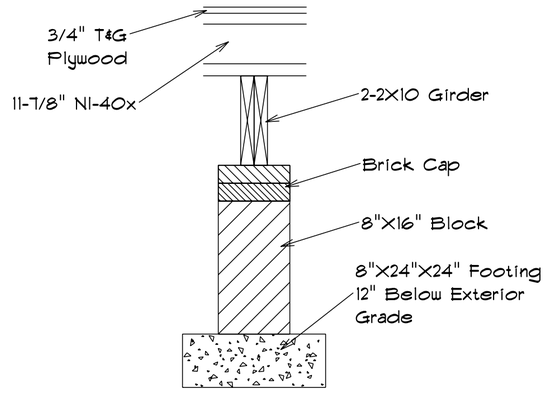
The Beaumont



Foundation Detail



Footing & Pier Detail



FOUNDATION VENTILATION

1269 Sq.Ft. Foundation Area
Requires 8.46 Sq.Ft. Ventilation.
With 6 Mil. Poly, Plans Indicate
Vents For Adequate Cross
Ventilation.

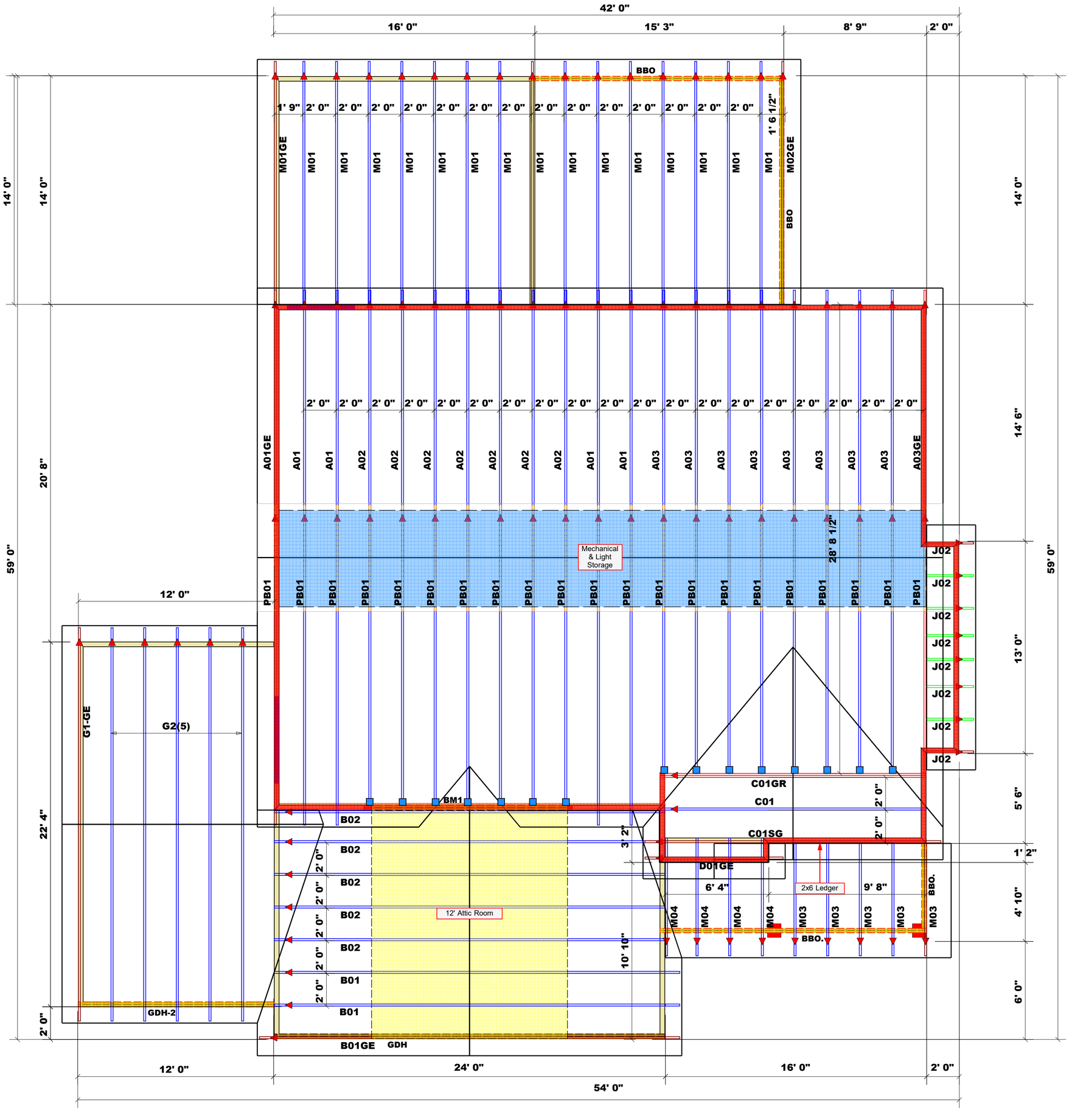
Foundation Plan

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

DATE: 7/23/2021
REVISED
DRAWING#

SCALE: 1/4"
DRAWN BY
APPROVED

The Beaumont



Plumbing Drop Notes
1. Plumbing drop locations shown are NOT exact.
2. Contractor to verify ALL plumbing drop locations prior to setting Floor Trusses.
3. Adjust spacing as needed not to exceed 24"oc.

Hatch Legend
2nd Floor Walls @ 8' 1 1/2"
Flush Beam
Drop Beam

Roof Area	= 3393.28 sq.ft.
Ridge Line	= 90.93 ft.
Hip Line	= 0 ft.
Horiz. OH	= 200.89 ft.
Raked OH	= 261 ft.
Decking	= 117 sheets

All Walls Shown Are Considered Load Bearing

▲ = Indicates Left End of Truss (Reference Engineered Truss Drawing) Do Not Erect Trusses Backwards

1 Truss Placement Plan
Scale: 1/4"=1'

Products				
PlotID	Length	Product	Plies	Net Qty
BM3	10' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
BM6	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
GDH	24' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
GDH-2	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
BM4 (Rip to 13")	7' 0"	1-3/4"x 14" LVL Kerto-S	2	2
BM2	20' 0"	1-3/4"x 16" LVL Kerto-S	2	2
BM5 (TOP FLUSH W/ FL.)	24' 0"	1-3/4"x 23-7/8" LVL Kerto-S	3	3

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
●	HUS410	USP	1	Varies	16d/3-1/2"	16d/3-1/2"
■	HUS26	USP	15	Varies	16d/3-1/2"	16d/3-1/2"

Products				
PlotID	Length	Product	Plies	Net Qty
BM1	13' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Neil Baggett

Neil Baggett

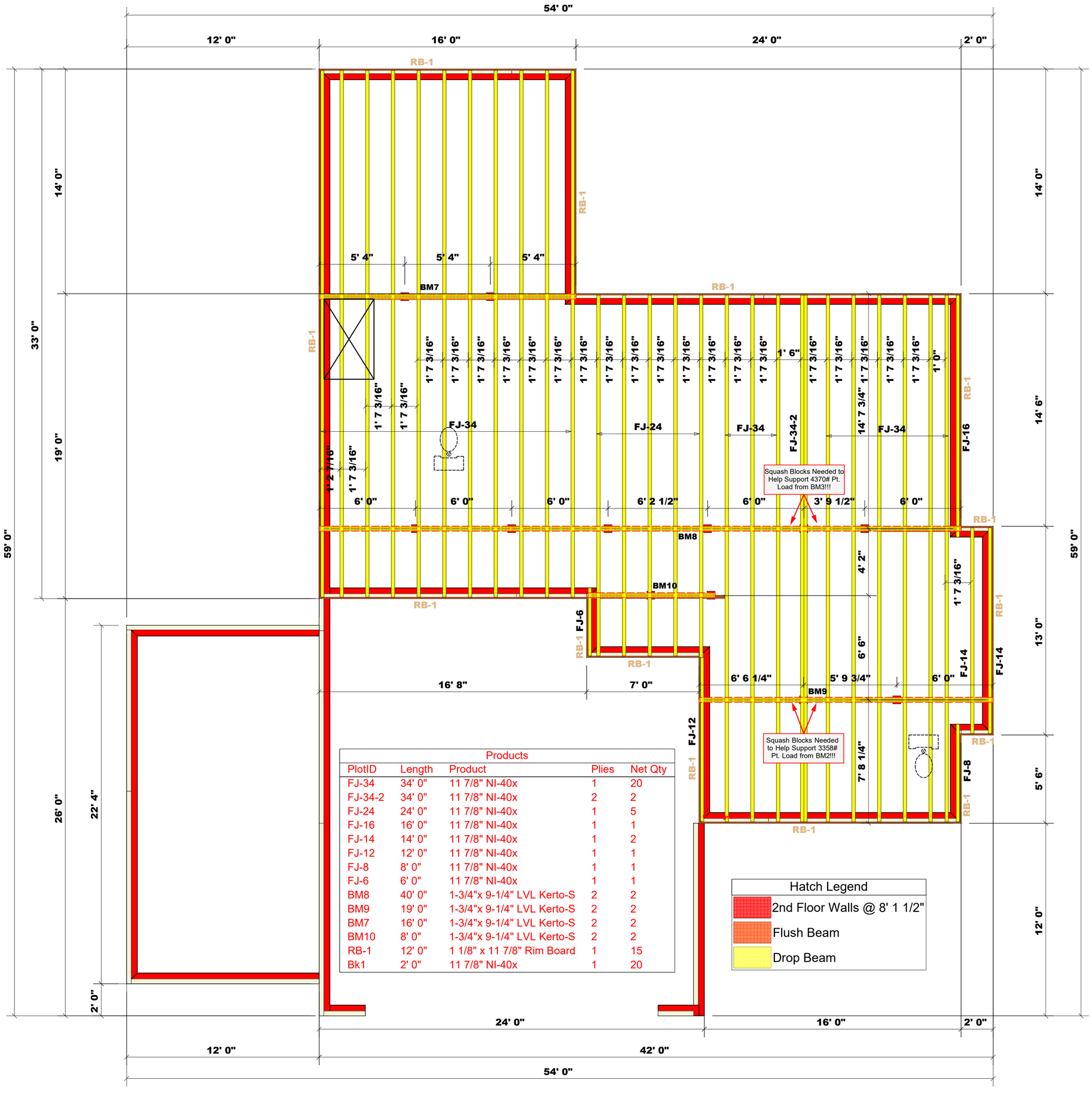
LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

END REACTION (UP TO)	REQ'D STUDS FOR (2) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (3) PLY HEADER	END REACTION (UP TO)	REQ'D STUDS FOR (4) PLY HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

BUILDER	Harnett
JOB NAME	Lot 17 Forest Ridge
PLAN	Roof
SEAL DATE	4/8/2021
QUOTE #	Neil Baggett
JOB #	Marshall Naylor
CITY / CO.	Ben Stout Real Estate
ADDRESS	Lot 17 Forest Ridge
MODEL	Beaumont
DATE REV.	5/4/2020
DRAWN BY	Quote #
SALES REP.	J0421-2290

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com



Products				
PlotID	Length	Product	Plies	Net Qty
FJ-34	34' 0"	11 7/8" NI-40x	1	20
FJ-34-2	34' 0"	11 7/8" NI-40x	2	2
FJ-24	24' 0"	11 7/8" NI-40x	1	5
FJ-16	16' 0"	11 7/8" NI-40x	1	1
FJ-14	14' 0"	11 7/8" NI-40x	1	2
FJ-12	12' 0"	11 7/8" NI-40x	1	1
FJ-8	8' 0"	11 7/8" NI-40x	1	1
FJ-6	6' 0"	11 7/8" NI-40x	1	1
BM8	40' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
BM9	19' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
BM7	16' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
BM10	8' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
RB-1	12' 0"	1 1/8" x 11 7/8" Rim Board	1	15
Bk1	2' 0"	11 7/8" NI-40x	1	20

Hatch Legend

- 2nd Floor Walls @ 8' 1 1/2"
- Flush Beam
- Drop Beam

COMTECH

ROOF & FLOOR TRUSSES & BEAMS

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Signature_____

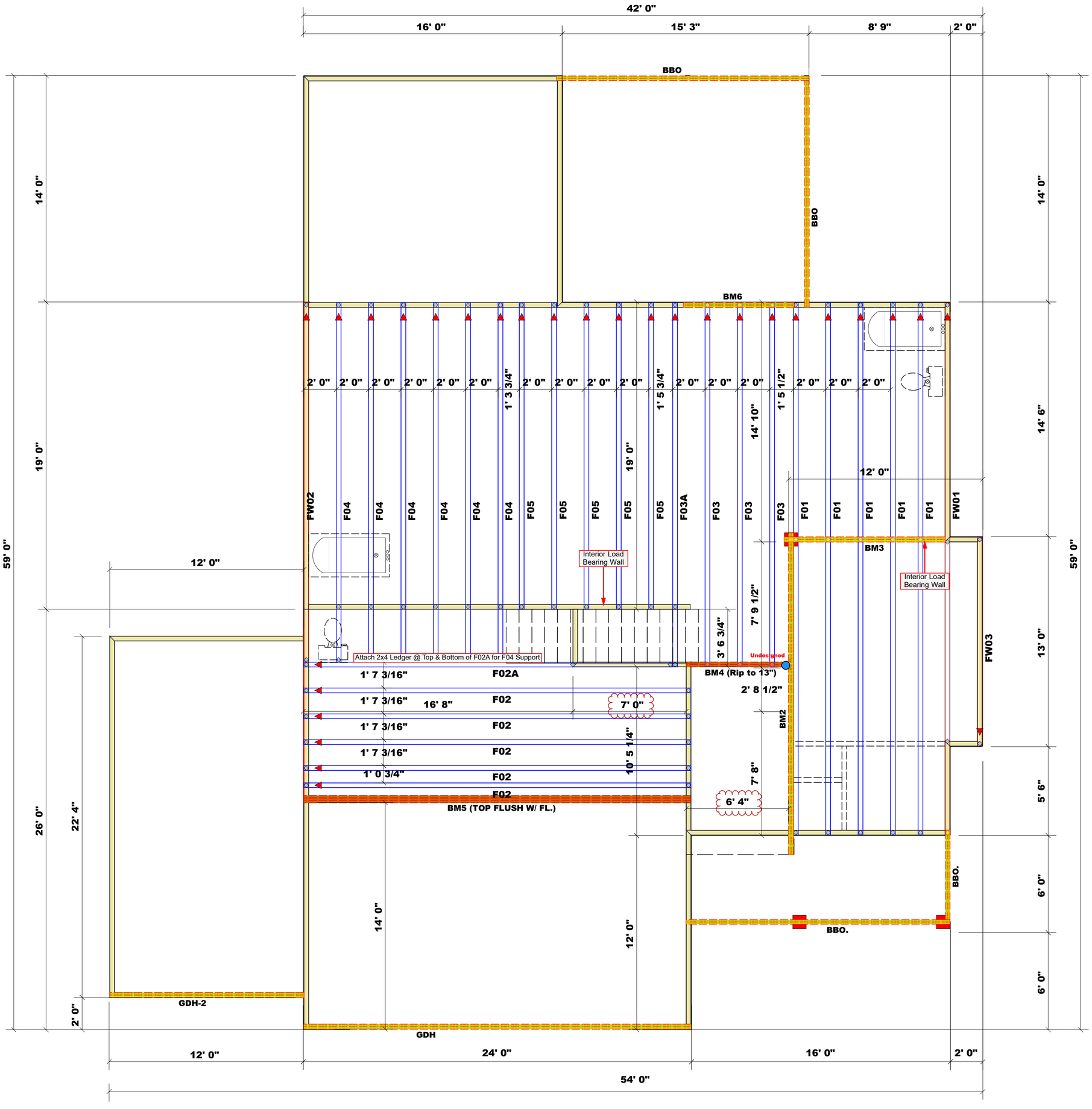
Neil Baggett

LOAD CHART FOR JACK STUDS

(BASED ON TABLES R502.5(1) & (b))

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER								
END REACTION (LB TOT)	REQ'D STUDS FOR (2) PLY HEADER		END REACTION (LB TOT)	REQ'D STUDS FOR (3) PLY HEADER		END REACTION (LB TOT)	REQ'D STUDS FOR (4) PLY HEADER	
1700	1		2550	1		3400	1	
3400	2		5100	2		6800	2	
5100	3		7650	3		10200	3	
6800	4		10200	4		13600	4	
8500	5		12750	5		17000	5	
10200	6		15300	6				
11900	7							
13600	8							
15300	9							

BUILDER	Ben Stout Real Estate
JOB NAME	Lot 17 Forest Ridge
PLAN	Beaumont w/3rd Car
SEAL DATE	4/23/2021
QUOTE #	N/A
JOB #	J0421-2289
COUNTY	Harnett
ADDRESS	Lot 17 Forest Ridge
MODEL	Crawl I-Joist
DATE REV.	4/27/2021
DRAWN BY	Neil Baggett
SALESMAN	Marshall Naylor



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Hatch Legend
2nd Floor Walls @ 8' 1 1/2"
Flush Beam
Drop Beam

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Ridge Line	= 90.93 ft.
Hip Line	= 0 ft.
Horiz. OH	= 200.89 ft.
Raked OH	= 261 ft.
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▲ = Indicates Left End of Truss (Reference Engineered Truss Drawing) Do Not Erect Trusses Backwards

1 Truss Placement Plan
Scale: 1/4"=1'

Products				
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BM3	10' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
BM6	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
GDH	24' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
GDH-2	12' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
BM4 (Rip to 13")	7' 0"	1-3/4"x 14" LVL Kerto-S	2	2
BM2	20' 0"	1-3/4"x 16" LVL Kerto-S	2	2
BM5 (TOP FLUSH W/ FL.)	24' 0"	1-3/4"x 23-7/8" LVL Kerto-S	3	3

Connector Information					Nail Information	
Sym	Product	Manuf	Qty	Supported Member	Header	Truss
●	HUS410	USP	1	Varies	16d/3-1/2"	16d/3-1/2"
■	HUS26	USP	15	Varies	16d/3-1/2"	16d/3-1/2"

Products				
PlotID	Length	Product	Plies	Net Qty
BM1	13' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2

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Signature_____

Neil Baggett

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(BASED ON TABLES R502.5(1) & (b))

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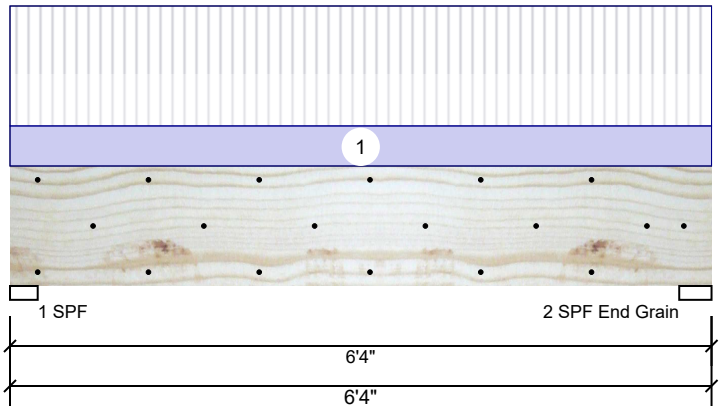
8500	5		12750	5		17000	5	
10200	6		15300	6				
11900	7							
13600	8							
15300	9							

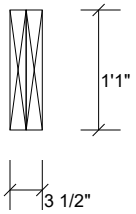
BUILDER	Ben Stout Real Estate
JOB NAME	Lot 17 Forest Ridge
PLAN	Beaumont w/3rd Car
SEAL DATE	4/23/2021
QUOTE #	N/A
JOB #	J0421-2291
COUNTY	Harnett
ADDRESS	Lot 17 Forest Ridge
MODEL	Floor
DATE REV.	4/27/2021
DRAWN BY	Neil Baggett
SALESMAN	Marshall Naylor

Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM4 Kerto-S LVL 1.750" X 13.000" 2-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1431	510	0	0	0
2	1450	517	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.000"	44%	510 / 1431	1941	L	D+L
2 - SPF End Grain	3.500"	18%	517 / 1450	1967	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2700 ft-lb	3'1 3/4"	23540 ft-lb	0.115 (11%)	D+L	L
Unbraced	2700 ft-lb	3'1 3/4"	15335 ft-lb	0.176 (18%)	D+L	L
Shear	1157 lb	5' 1/4"	9707 lb	0.119 (12%)	D+L	L
LL Defl inch	0.015 (L/4787)	3'1 3/4"	0.148 (L/480)	0.100 (10%)	L	L
TL Defl inch	0.020 (L/3530)	3'1 3/4"	0.197 (L/360)	0.100 (10%)	D+L	L

Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 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			Top	152 PLF	455 PLF	0 PLF	0 PLF	0 PLF	F03 FL. TRUSSES
	Self Weight				10 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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

Manufacturer Info

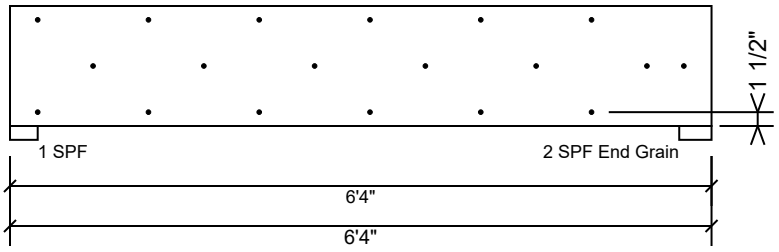
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

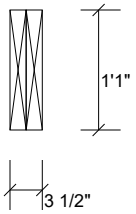
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM4 Kerto-S LVL 1.750" X 13.000" 2-Ply - PASSED

Level: Level





Multi-Ply Analysis

Fasten all plies using 3 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	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

Manufacturer Info

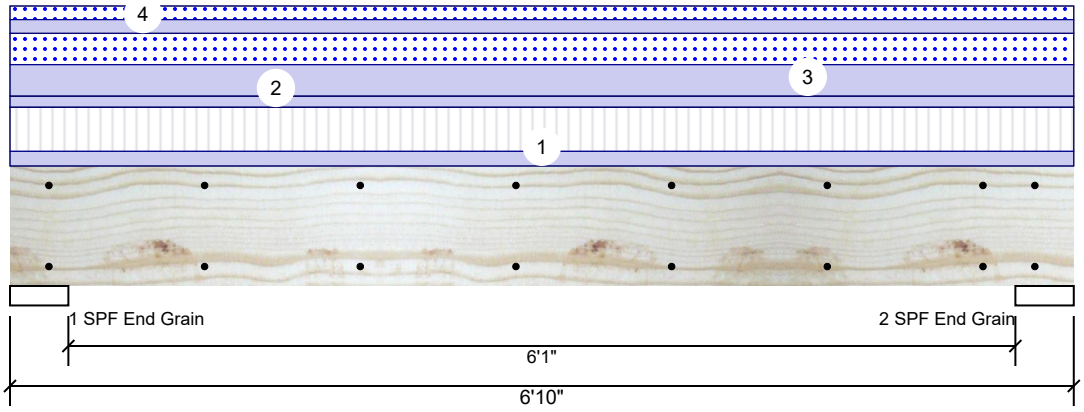
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

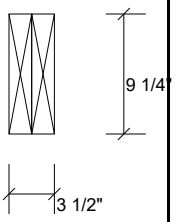
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM6 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1548	2508	1579	0	0
2	1548	2508	1579	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	35%	2508 / 2345	4853	L	D+0.75(L+S)
2 - SPF End Grain	4.500"	35%	2508 / 2345	4853	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6844 ft-lb	3'5"	14423 ft-lb	0.474 (47%)	D+0.75(L+S)	L
Unbraced	6844 ft-lb	3'5"	10370 ft-lb	0.660 (66%)	D+0.75(L+S)	L
Shear	3503 lb	1'1"	7943 lb	0.441 (44%)	D+0.75(L+S)	L
LL Defl inch	0.061 (L/1212)	3'5"	0.155 (L/480)	0.400 (40%)	0.75(L+S)	L
TL Defl inch	0.127 (L/586)	3'5"	0.207 (L/360)	0.610 (61%)	D+0.75(L+S)	L

Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 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			Top	151 PLF	453 PLF	0 PLF	0 PLF	0 PLF	F03 FL. TRUSSES
2	Uniform			Top	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
3	Uniform			Top	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A03 RF. TRUSSES
4	Uniform			Far Face	140 PLF	0 PLF	140 PLF	0 PLF	0 PLF	M01 RF. TRUSSES
	Self Weight				7 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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

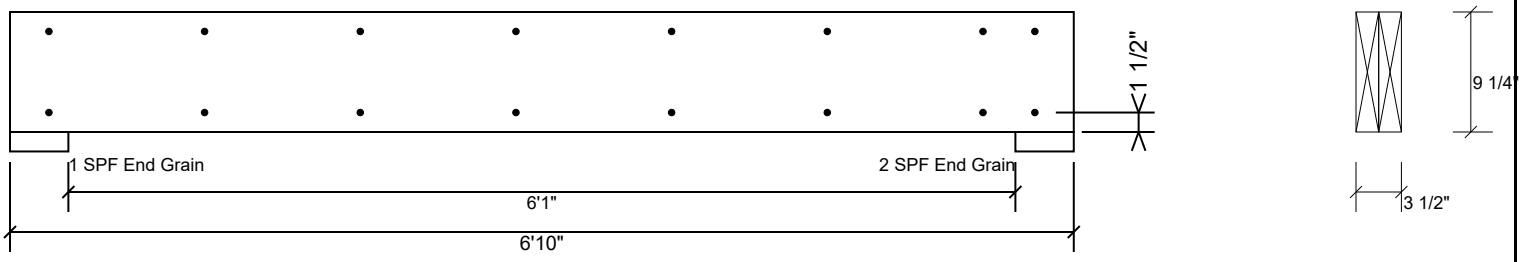
Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

BM6 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

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	74.4 %
Load	140.0 PLF
Yield Limit per Foot	188.3 PLF
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

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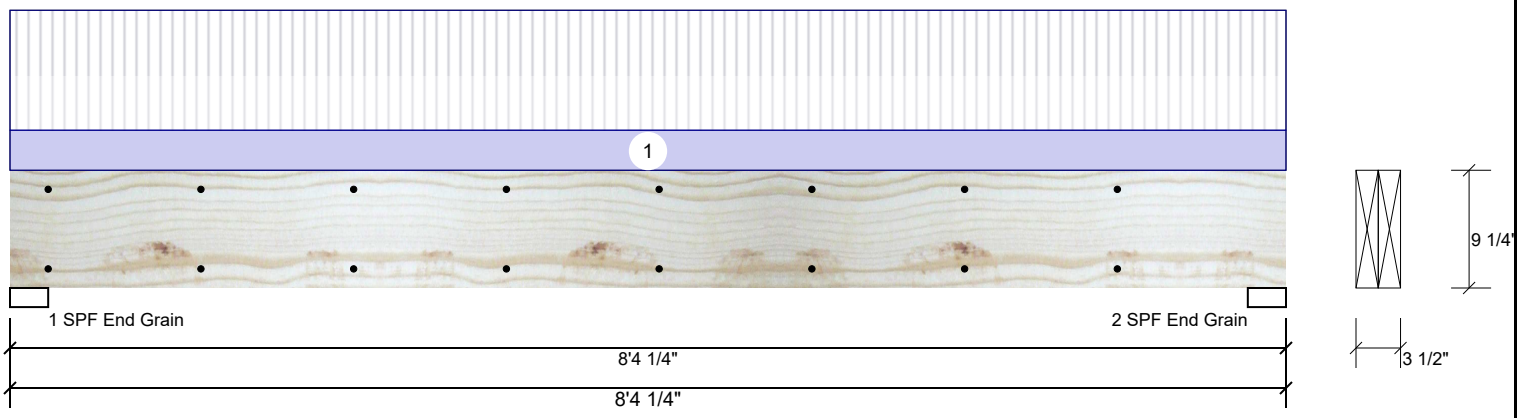
910-864-TRUS

BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	3254	1116	0	0	0
2	3254	1116	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	48%	1116 / 3254	4370	L	D+L
2 - SPF End Grain	3.000"	48%	1116 / 3254	4370	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8326 ft-lb	4'2 1/8"	12542 ft-lb	0.664 (66%)	D+L	L
Unbraced	8326 ft-lb	4'2 1/8"	8569 ft-lb	0.972 (97%)	D+L	L
Shear	3367 lb	7'4 3/4"	6907 lb	0.488 (49%)	D+L	L
LL Defl inch	0.176 (L/544)	4'2 3/16"	0.199 (L/480)	0.880 (88%)	L	L
TL Defl inch	0.236 (L/405)	4'2 3/16"	0.266 (L/360)	0.890 (89%)	D+L	L

Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 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			Top	260 PLF	779 PLF	0 PLF	0 PLF	0 PLF	F01 FL. TRUSSES
	Self Weight				7 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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

Manufacturer Info

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ICC-ES: ESR-3633

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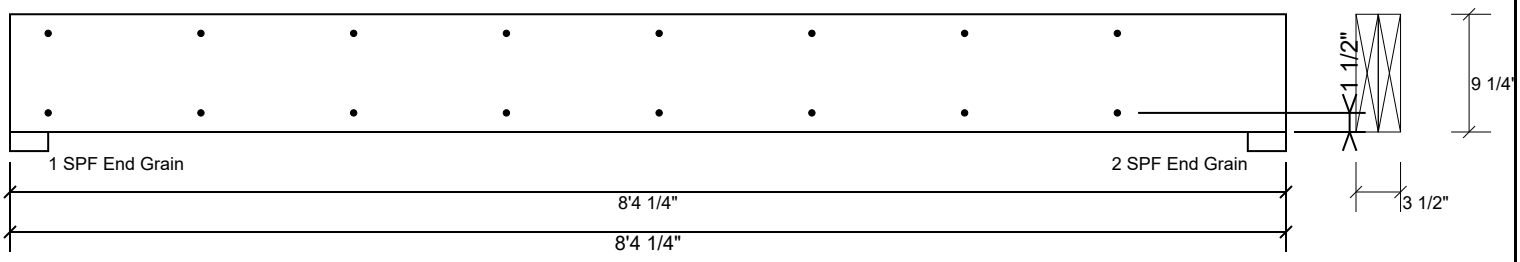
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

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	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

Manufacturer Info

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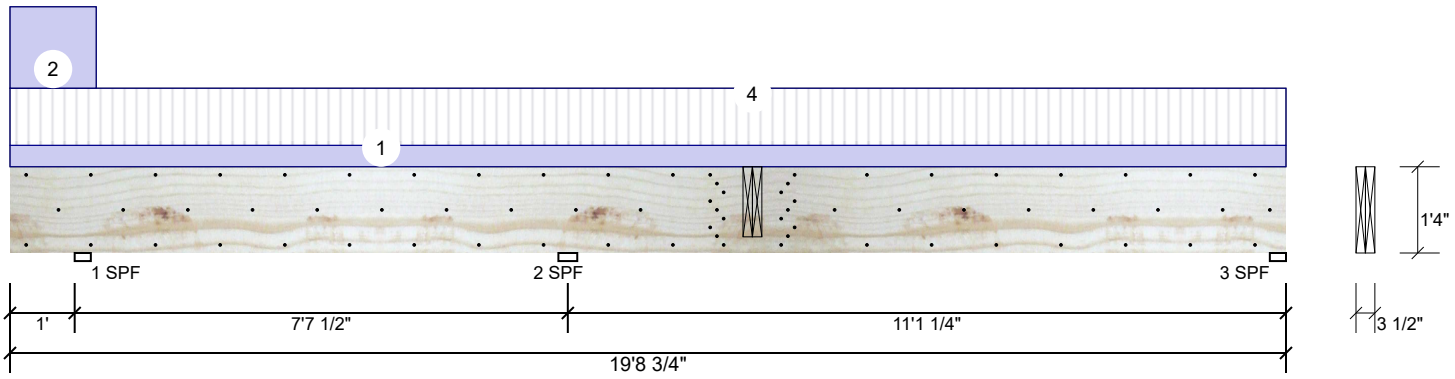
Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	92	242	0	0	0
2	2314	976	0	0	0
3	622	287	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.000"	13%	230 / 366	596 (-65)	LL_	D+L(D+L)
2 - SPF	3.500"	65%	997 / 2374	3371	_LL	D+L
3 - SPF	3.000"	20%	279 / 622	901	L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3557 ft-lb	8'7 1/2"	34565 ft-lb	0.103 (10%)	D+L	_LL
Unbraced	-3557 ft-lb	8'7 1/2"	11260 ft-lb	0.316 (32%)	D+L	_LL
Pos Moment	3155 ft-lb	12'4 1/2"	34565 ft-lb	0.091 (9%)	D+L	L_L
Unbraced	3155 ft-lb	12'4 1/2"	11260 ft-lb	0.280 (28%)	D+L	L_L
Shear	2284 lb	9'11 1/2"	11947 lb	0.191 (19%)	D+L	_LL
LL Defl inch	0.027 (L/4865)	13'5 7/8"	0.273 (L/480)	0.100 (10%)	L	L_L
TL Defl inch	0.038 (L/3483)	13'6 1/2"	0.364 (L/360)	0.100 (10%)	D+L	L_L
LL Cant	0.001 (2L/16297)	Lt Cant	0.200 (2L/480)	0.007 (1%)	L	L_L
TL Cant	0.002 (2L/12872)	Lt Cant	0.300 (2L/360)	0.006 (1%)	D+L	L_L

Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
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 1 for uplift 65 lb (Combination D+L, Load Case __L).
7 Top braced at bearings.
8 Bottom braced at bearings.
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.

Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

Manufacturer Info

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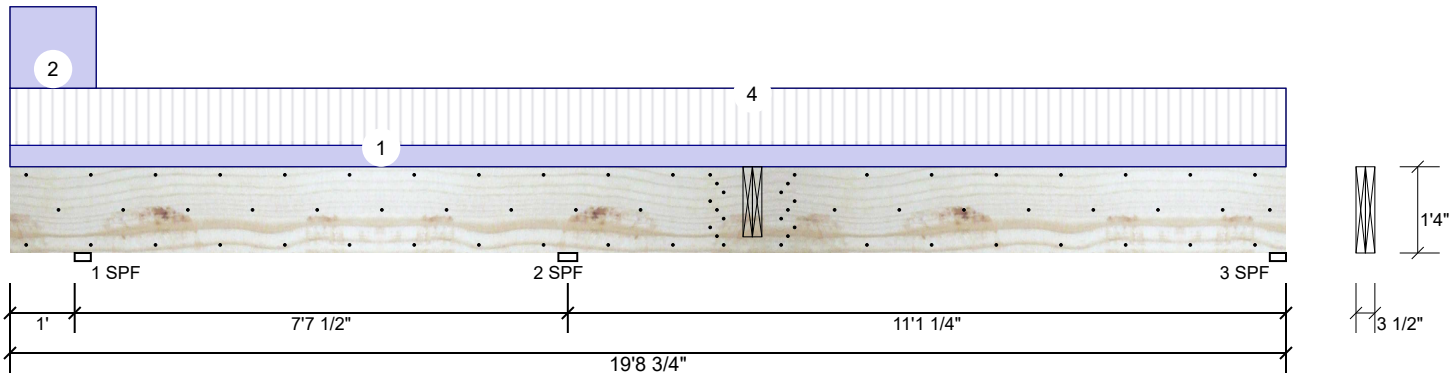
Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

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			Top	30 PLF	80 PLF	0 PLF	0 PLF	0 PLF	FL. LOADING
2	Part. Uniform	0-0-0 to 1-4-0		Top	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
4	Point	11-5-12		Far Face	517 lb	1450 lb	0 lb	0 lb	0 lb	7'-FB. @ FOYER Brg 2
	Self Weight				12 PLF					

Notes

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Lumber

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

Handling & Installation

1. LVL 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

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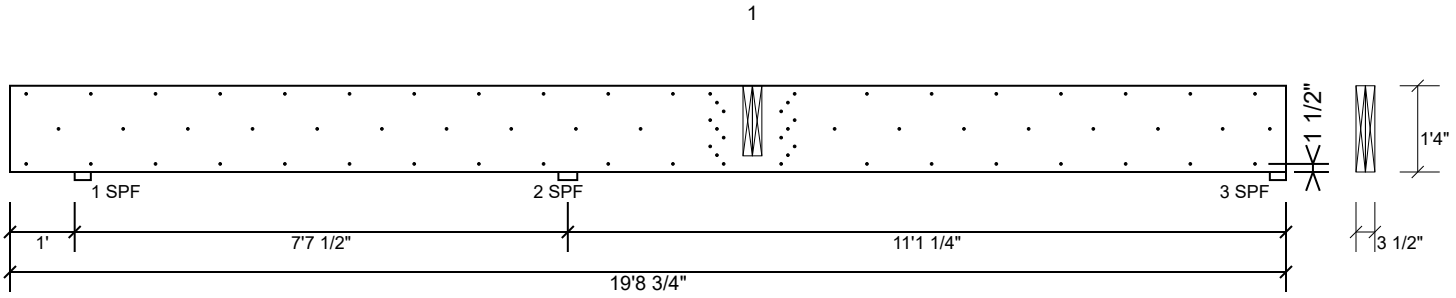
BM2 Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

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"

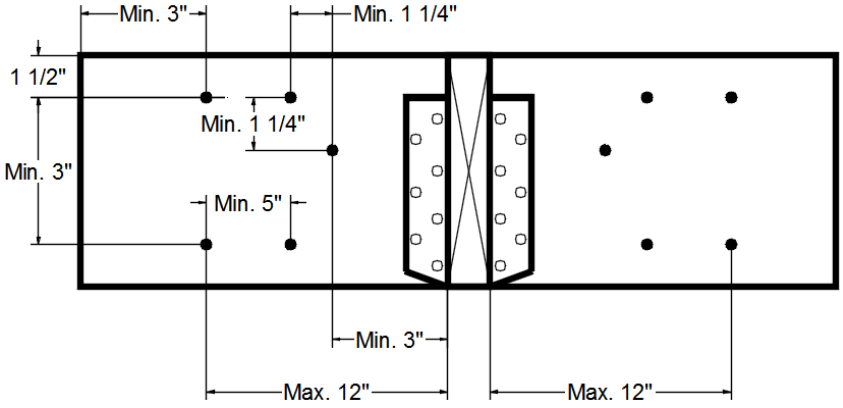
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 11-5-12 with a minimum of (18) – 10d Box nails (.128x3") in the pattern shown.

Capacity	66.8 %
Load	983.5lb.
Total Yield Limit	1473.0 lb.
Cg	0.9998
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Load Combination	D+L
Duration Factor	1.00

Min/Max fastener distances for Concentrated Side Loads



Notes

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Lumber

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

Handling & Installation

1. LVL 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

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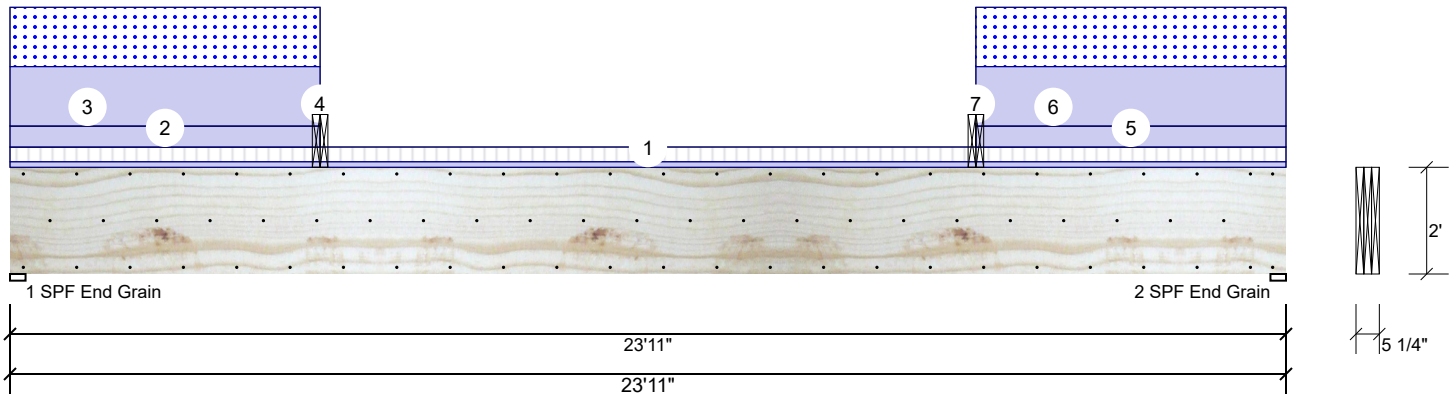
Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM5 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level



Member Information

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:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	957	5205	3791	0	0
2	957	5205	3791	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	56%	5205 / 3791	8996	L	D+S
2 - SPF End Grain	3.500"	56%	5205 / 3791	8996	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	37841 ft-lb	11'11 1/2"	131295 ft-lb	0.288 (29%)	D+0.75(L+S)	L
Unbraced	37841 ft-lb	11'11 1/2"	37957 ft-lb	0.997 (100%)	D+0.75(L+S)	L
Shear	7185 lb	21'8 3/8"	30912 lb	0.232 (23%)	D+S	L
LL Defl inch	0.160 (L/1763)	11'11 9/16"	0.587 (L/480)	0.270 (27%)	S	L
TL Defl inch	0.378 (L/746)	11'11 9/16"	0.783 (L/360)	0.480 (48%)	D+S	L

Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top must be laterally braced at a maximum of 7'1 1/8" o.c.
6 Bottom braced at bearings.
7 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			Top	30 PLF	80 PLF	0 PLF	0 PLF	0 PLF	FL. LOADING
2	Part. Uniform	0-0-0 to 5-9-12		Top	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE
3	Part. Uniform	0-0-0 to 5-9-12		Top	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A01 RF. TRUSSES
4	Point	5-9-12		Top	1977 lb	0 lb	1919 lb	0 lb	0 lb	13'-FB. @ PLAY ROOM Brg 1
5	Part. Uniform	18-1-4 to 23-11-0		Top	114 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL ABOVE

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

Manufacturer Info

Metsä Wood
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ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
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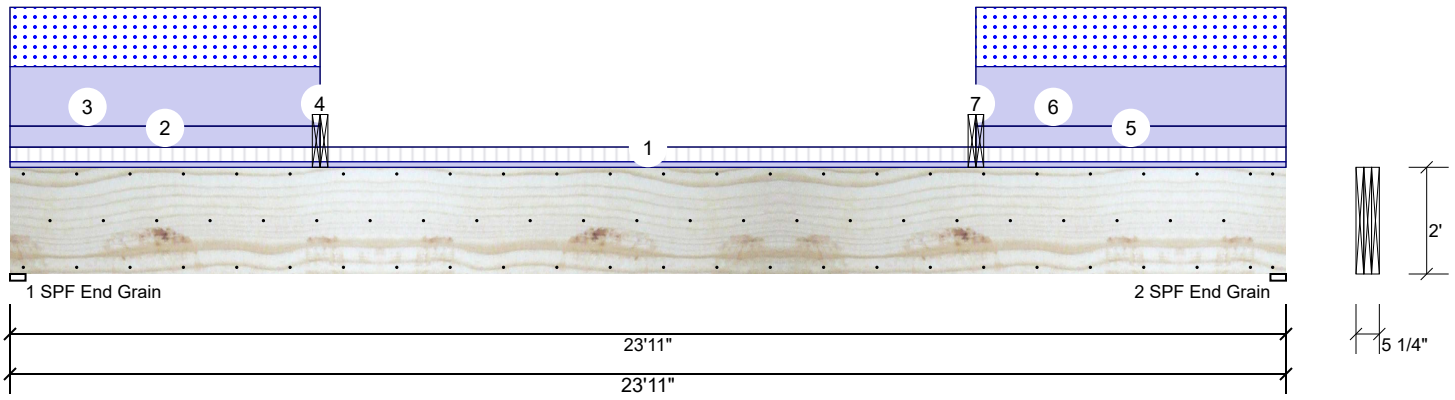
910-864-TRUS

BM5 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level



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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
6	Part. Uniform	18-1-4 to 23-11-0		Top	322 PLF	0 PLF	322 PLF	0 PLF	0 PLF	A01 RF. TRUSSES
7	Point	18-1-4		Top	1977 lb	0 lb	1919 lb	0 lb	0 lb	13'-FB. @ PLAY ROOM Brg 2
	Self Weight				28 PLF					

Notes

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Lumber

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

Handling & Installation

1. LVL 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
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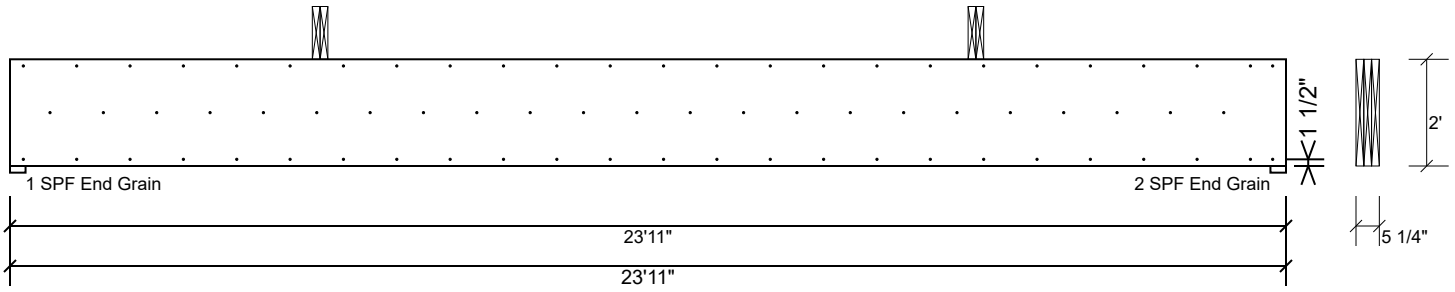
910-864-TRUS

Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM5 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

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 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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Lumber

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

Handling & Installation

1. LVL 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 11/27/2023

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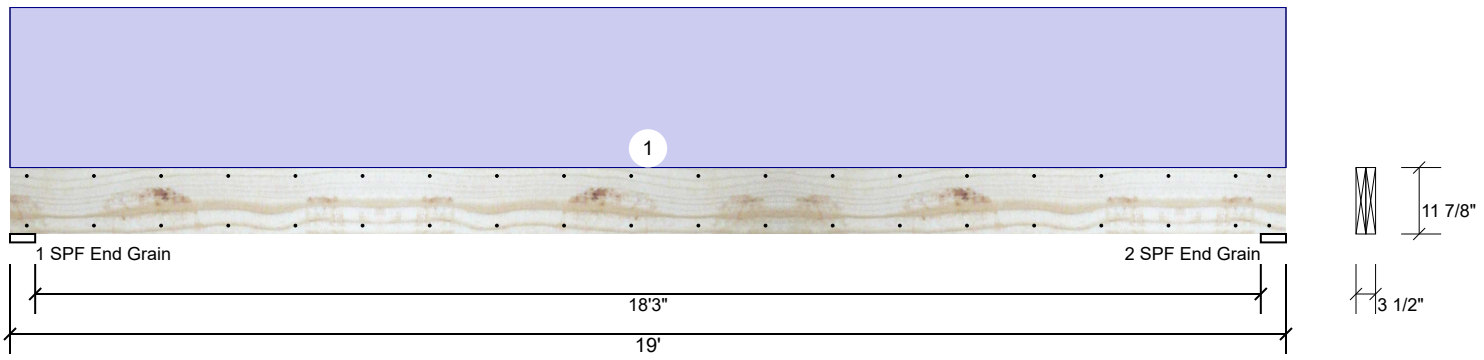
Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	2016	0	0	0
2	0	2016	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	15%	2016 / 0	2016	Uniform	D
2 - SPF End Grain	4.500"	15%	2016 / 0	2016	Uniform	D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8957 ft-lb	9'6"	17919 ft-lb	0.500 (50%)	D	Uniform
Unbraced	8957 ft-lb	9'6"	8966 ft-lb	0.999 (100%)	D	Uniform
Shear	1740 lb	17'8 3/8"	7980 lb	0.218 (22%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.582 (L/379)	9'6 1/16"	0.612 (L/360)	0.950 (95%)	D	Uniform

Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top must be laterally braced at a maximum of 10'4 1/8" o.c.
6 Bottom braced at bearings.
7 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			Top	203 PLF	0 PLF	0 PLF	0 PLF	0 PLF	END WALL / GABLE
	Self Weight				9 PLF					

Notes

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Lumber

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

Handling & Installation

1. LVL 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

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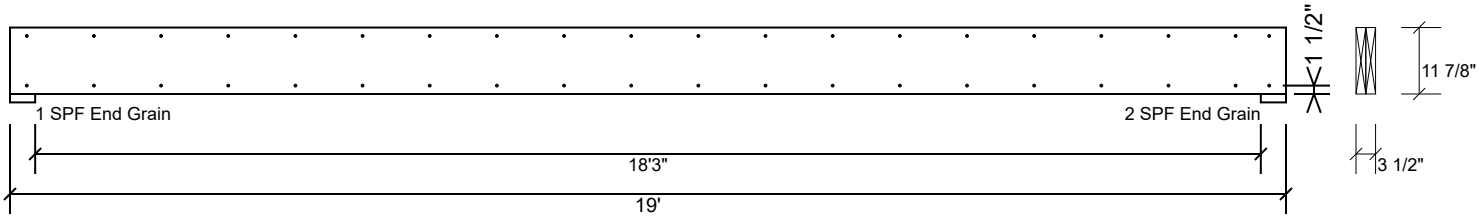
		Project #:	

GDH Kerto-S LVL 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.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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Lumber

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

Handling & Installation

1. LVL 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
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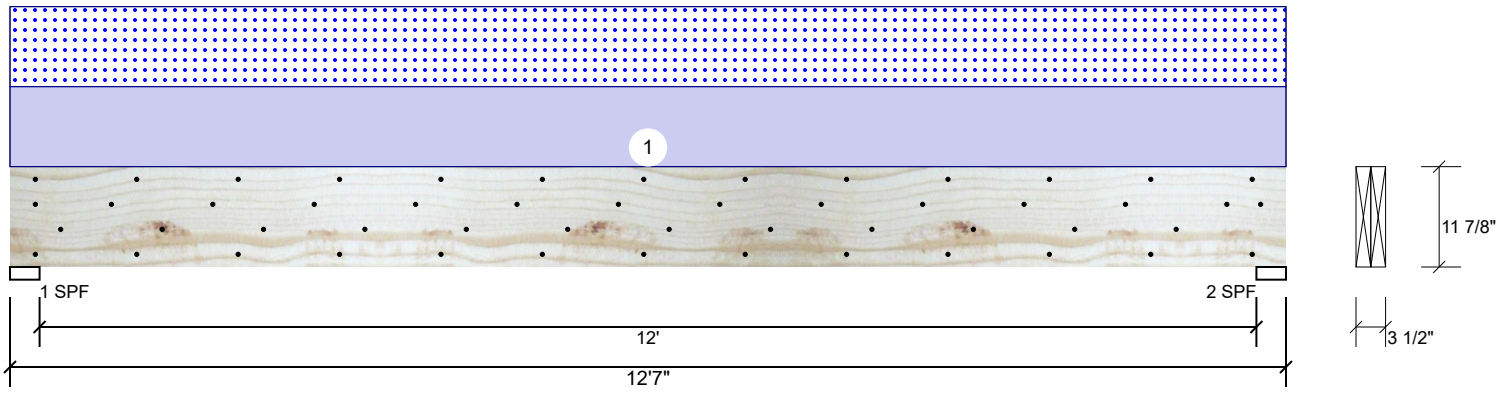
Client:	BEN STOUT	Date:	4/8/2021
Project:		Input by:	Neal Baggett
Address:		Job Name:	17 FOREST RIDGE
		Project #:	

BM1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Roof
Plies:	2	Slope:	0/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal - II	Deck:	Not Checked
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1977	1919	0	0
2	0	1977	1919	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	75%	1977 / 1919	3896	L	D+S
2 - SPF	3.500"	75%	1977 / 1919	3896	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11380 ft-lb	6'3 1/2"	22897 ft-lb	0.497 (50%)	D+S	L
Unbraced	11380 ft-lb	6'3 1/2"	11401 ft-lb	0.998 (100%)	D+S	L
Shear	3745 lb	1'2 5/8"	10197 lb	0.367 (37%)	D+S	L
LL Defl inch	0.167 (L/869)	6'3 1/2"	0.404 (L/360)	0.410 (41%)	S	L
TL Defl inch	0.340 (L/428)	6'3 1/2"	0.606 (L/240)	0.560 (56%)	D+S	L

Design Notes

1 Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be laterally braced at a maximum of 7'9" o.c.
5 Bottom braced at bearings.
6 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			Far Face	305 PLF	0 PLF	305 PLF	0 PLF	0 PLF	A02 RF. TRUSSES
	Self Weight				9 PLF					

Notes

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Lumber

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2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL 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
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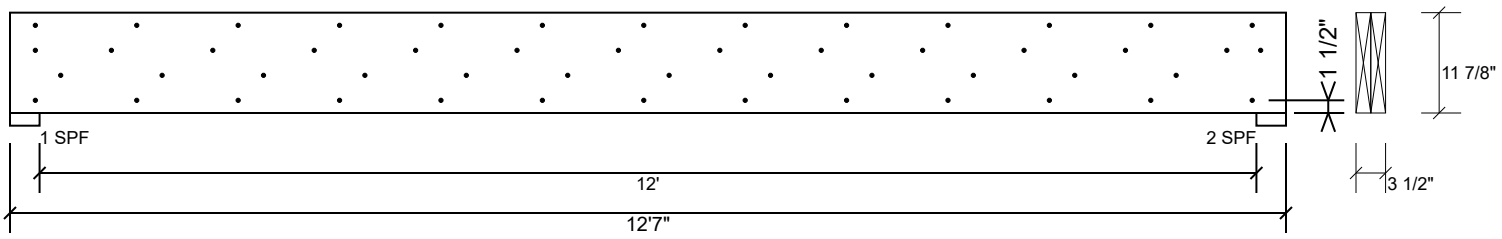
BM1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 4 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	81.0 %
Load	305.0 PLF
Yield Limit per Foot	376.5 PLF
Yield Limit per Fastener	94.1 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	D+S
Duration Factor	1.15

Notes

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Lumber

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Handling & Installation

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