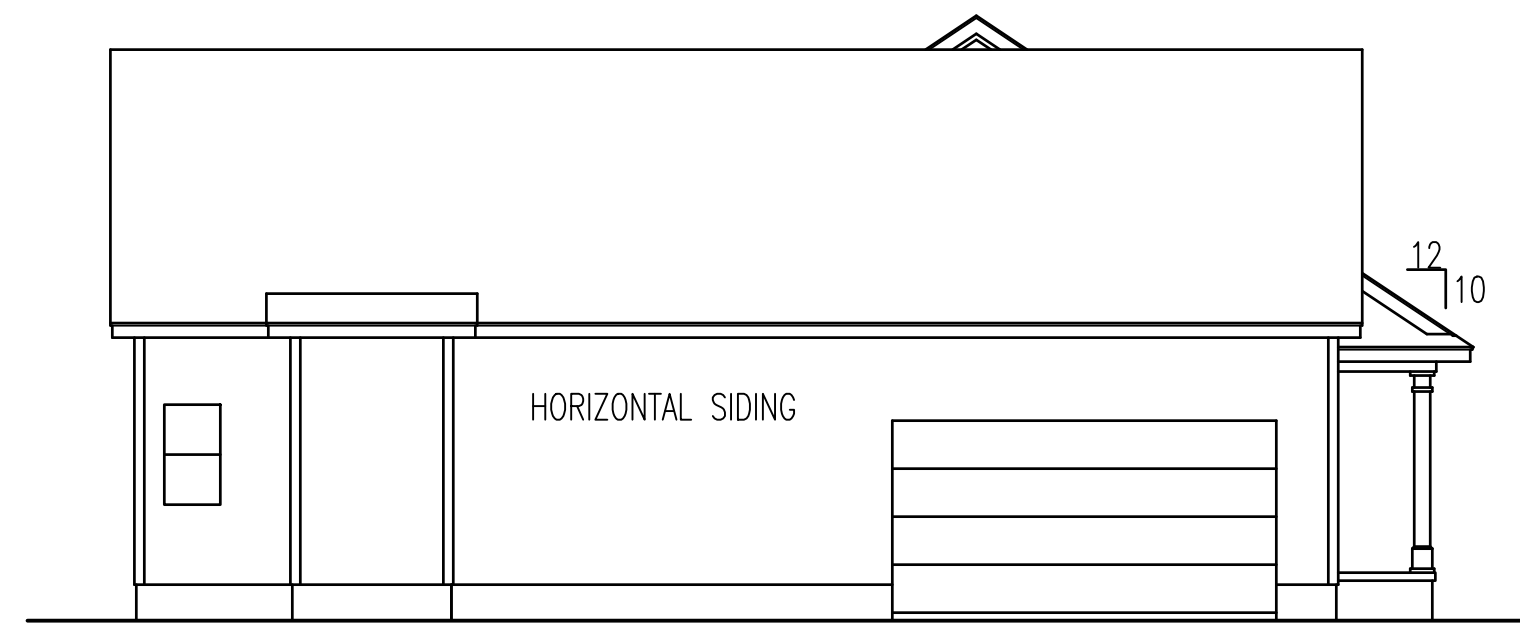




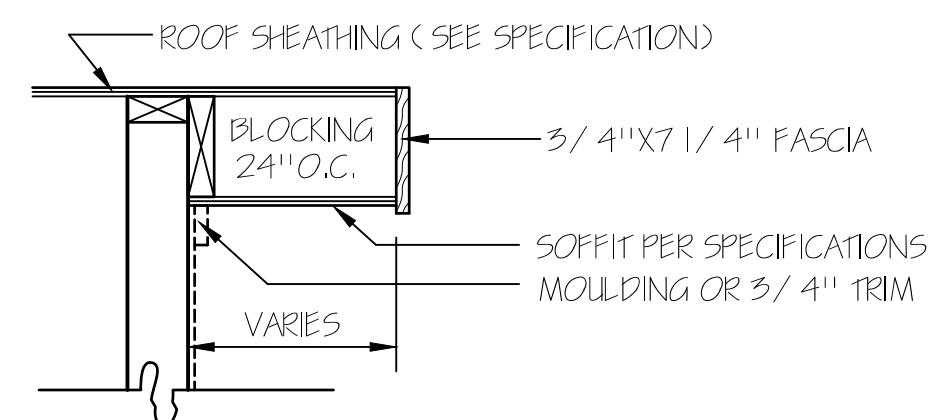
FRONT ELEVATION  
SCALE: 1/4" = 1'-0"



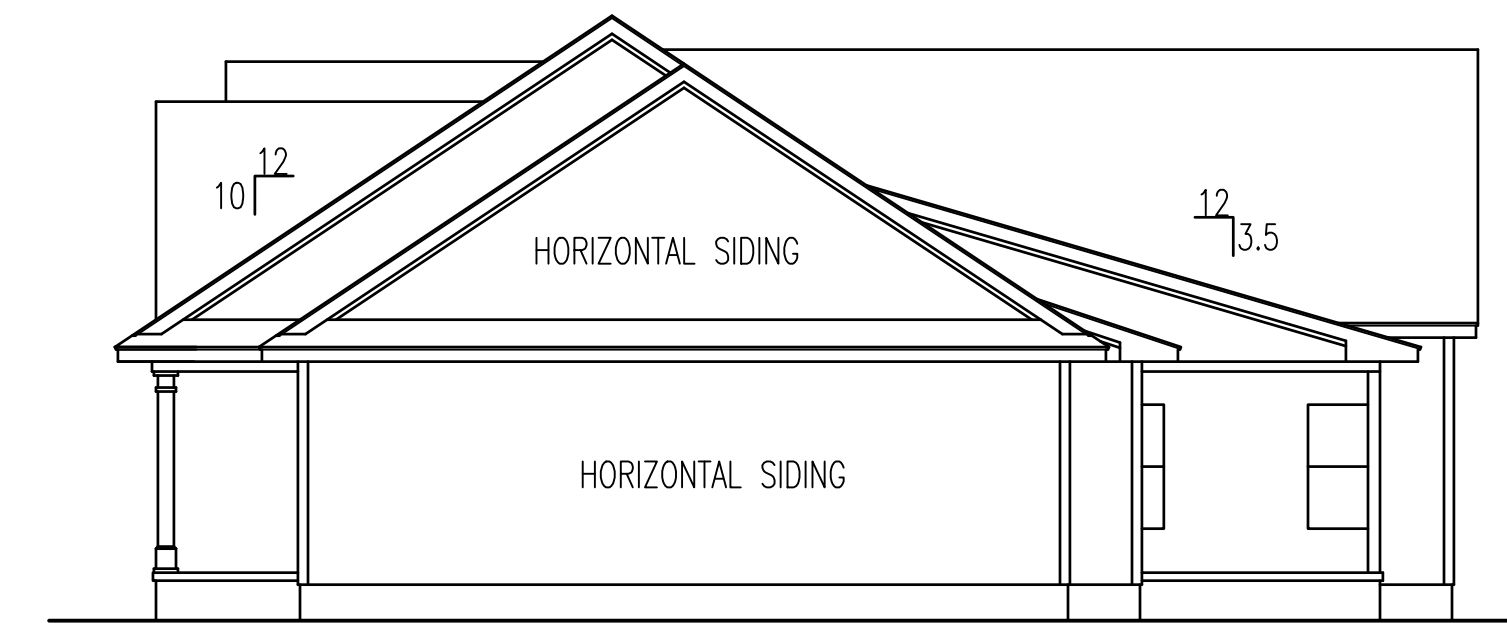
ATTIC VENTILATION CALCULATIONS	
ATTIC AREA	3064 SQ.FT. (AREA VENTILATION REQUIRED 204 SQ.FT.)
_____ FT. BASE GABLE LOUVER @ _____ SQ.FT. NET FREE AREA	_____ SQ.FT. NET FREE AREA
_____ FT. BASE GABLE LOUVER @ _____ SQ.FT. NET FREE AREA	_____ SQ.FT. NET FREE AREA
_____ FT. BASE GABLE LOUVER @ _____ SQ.FT. NET FREE AREA	_____ SQ.FT. NET FREE AREA
99 LIN.FT. EAVE VENT @ 11 SQ.IN./FT. = 7.8 SQ.FT. NET FREE AREA	
105 LIN.FT. RIDGE VENT @ 18 SQ.IN./FT. = 13.1 SQ.FT. NET FREE AREA	



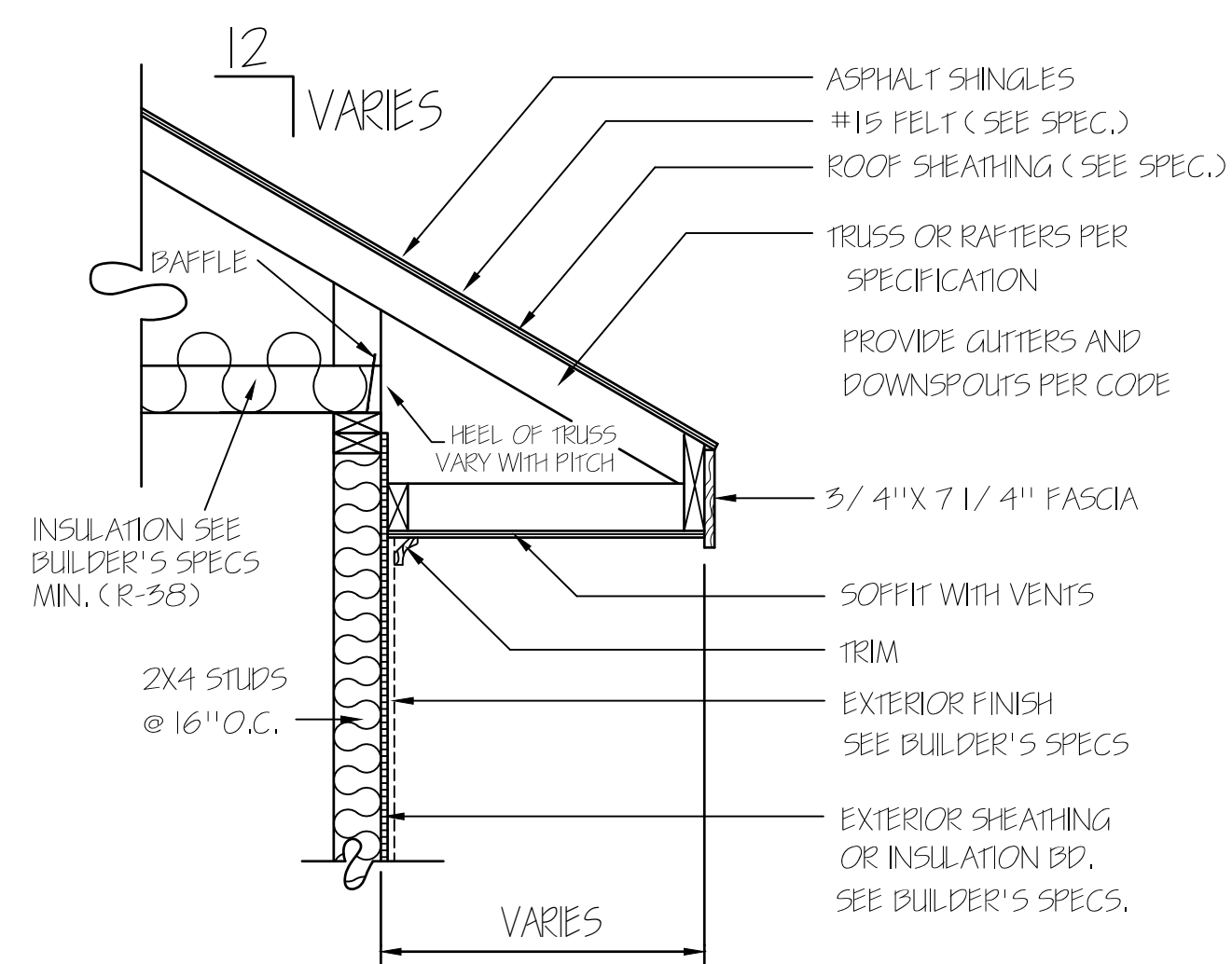
LEFT ELEVATION



RAKE DETAIL FOR GABLE ENDS



RIGHT ELEVATION



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

**T M DESIGNS**  
RESIDENTIAL PLANS BY TINA MCFADDEN  
(910) 354-4736 TMDDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:  
**WATERMARK HOMES**  
NAME: PONDEROSA  
LOT: 91 SOUTH CREEK

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I HEREBY CERTIFY THAT THIS DRAWING MEETS LOCAL CODES, 2018 INTERNATIONAL BUILDING CODES.

THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE REUSED.

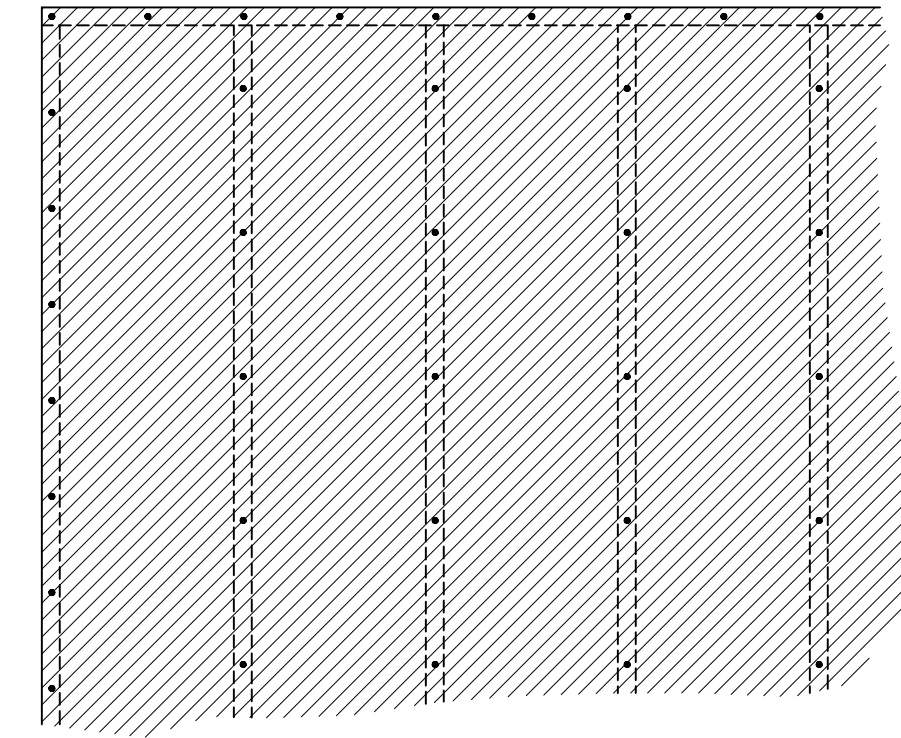
PLAN NUMBER  
RG21-A01

OPTION #6

1	GARAGE	L	F
	DATE:	3/16/23	

**ENERGY TABLE**  
FACTOR OF WINDOWS 30  
CLIMATE ZONE 4  
INSULATION: WALLS 15  
CEILING 38  
FLOORS 19

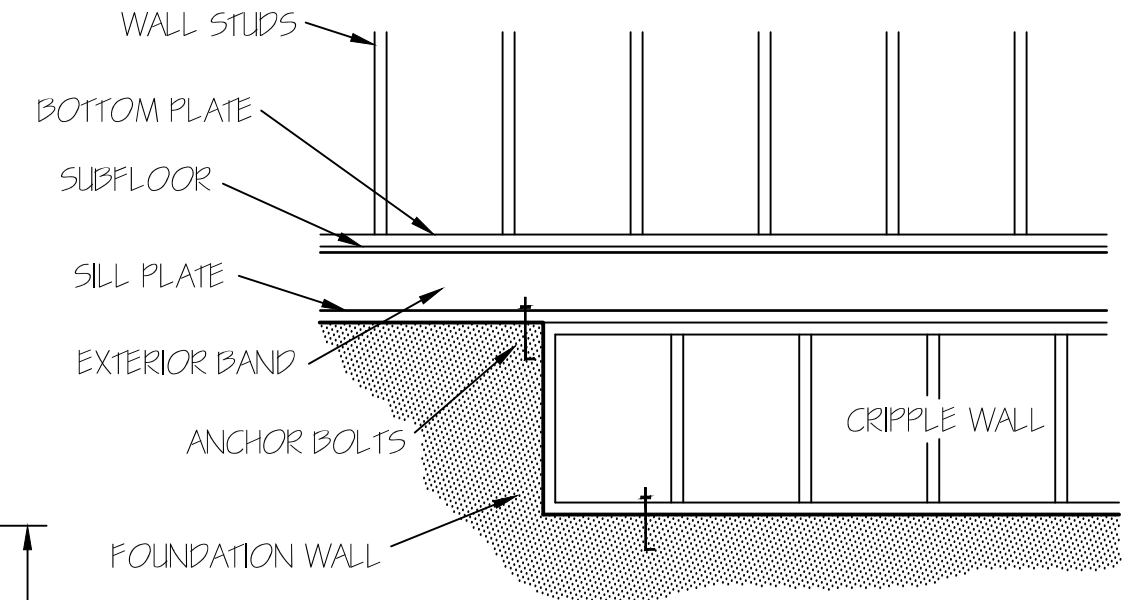
BRACING METHOD



EXTERIOR WALLS (2) 2X10 HEADERS	NUMBER OF STUDS	
	JACKS	KINGS
ALL DOOR & C.O. BELOW 4'	1	1
ALL DOOR & C.O. 4' TO 7'-11"	2	2
ALL DOOR & C.O. 8' AND ABOVE	SIZED BY ENGINEER	

**\*\*UNLESS NOTED OTHER WISE\*\***

EXTERIOR WALL TO BE FULLY SHEATHED WITH 7/16" OSB. NAILING PATTERN TO BE 8" ON ALL EDGES AND 12" IN FIELD, WITH 8d NAILS.



FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT SMALLER THAN THE STUDDING ABOVE. WHEN EXCEEDING 4 FT. IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY.  
CRIPPLE WALLS WITH A STUD HEIGHT LESS THAN 14 INCHES SHALL BE CONTINUOUSLY SHEATHED ON ONE SIDE WITH WOOD STRUCTURAL PANELS FASTENED TO BOTH THE TOP AND BOTTOM PLATES IN ACCORDANCE WITH TABLE B6C2.5(1), OR CRIPPLE WALLS SHALL BE CONSTRUCTED OF SOLID BLOCKING.

FIRST FLOOR PLAN

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

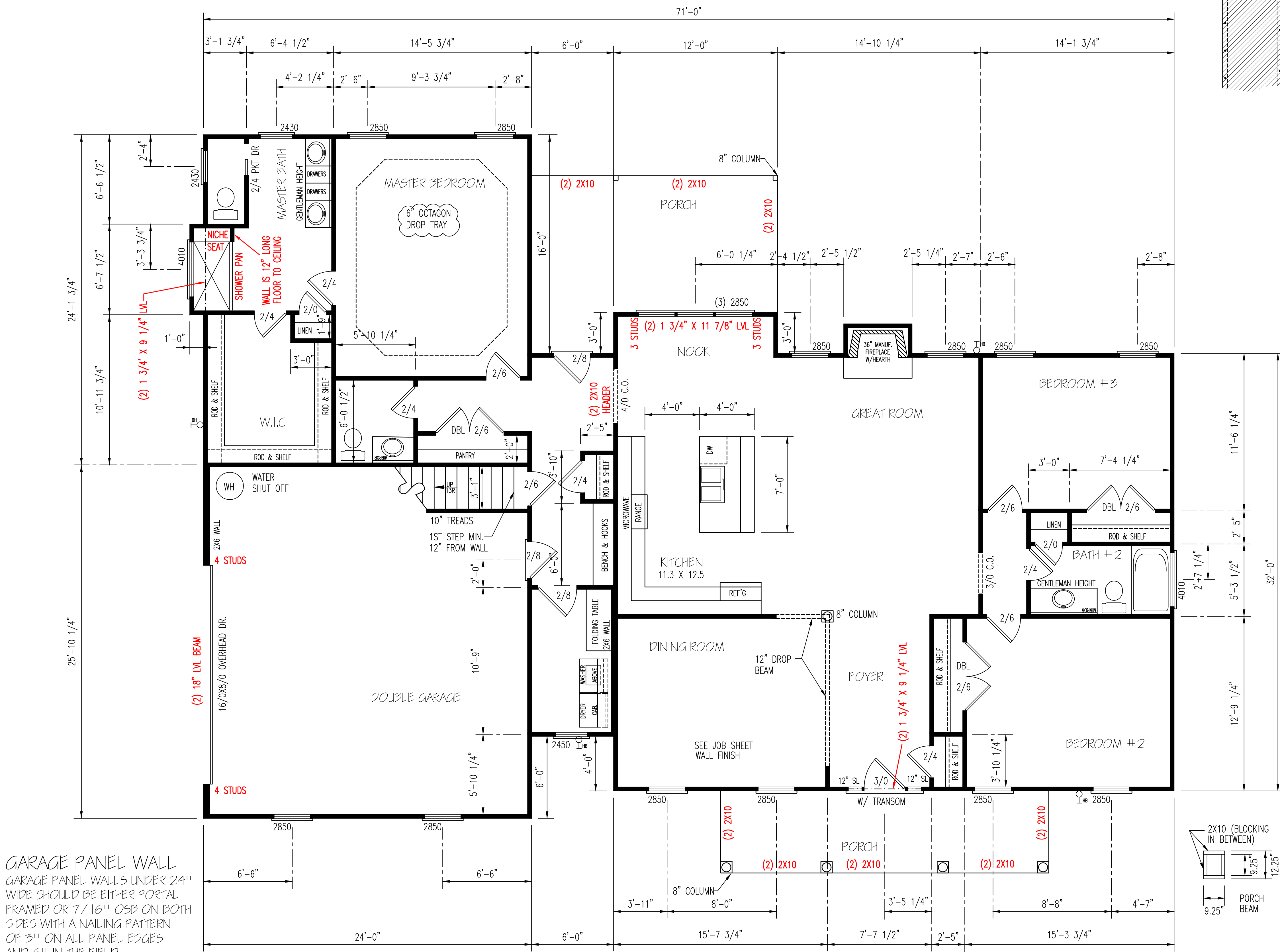
**HEATED AREA**

1ST FL	2111	SQ FT
2ND FL	348	SQ FT
TOTAL	2459	SQ FT

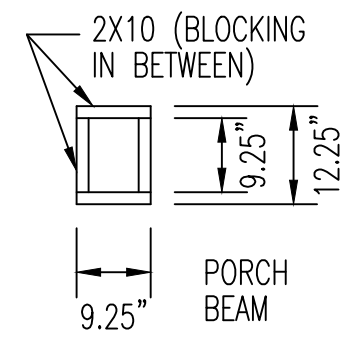
**OTHER AREAS**

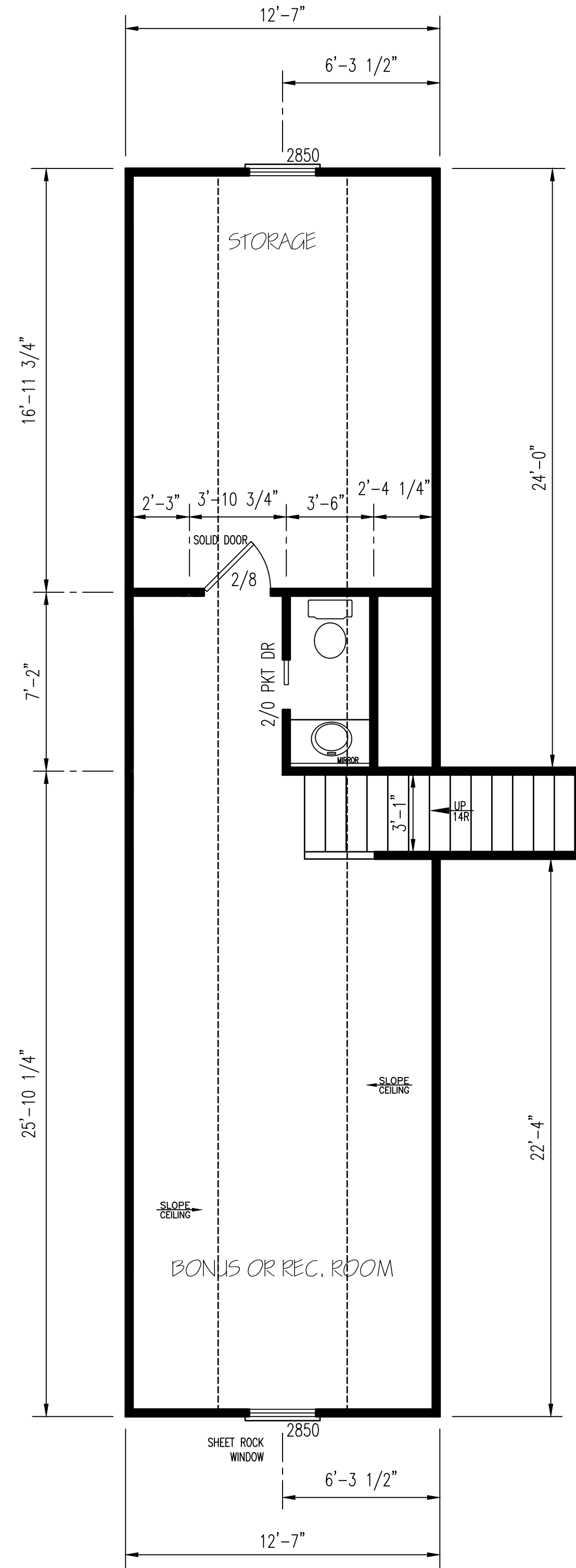
GARAGE	611	SQ FT
F.PORCH	144	SQ FT
R.PORCH	198	SQ FT
STORAGE	302	SQ FT
TOTAL	1255	SQ FT

**NOTE:**  
CEILINGS ARE 9'-0"  
UNLESS NOTED.  
SET WINDOWS @ 7'-4" A.F.F.



**GARAGE PANEL WALL**  
GARAGE PANEL WALLS UNDER 24" WIDE SHOULD BE EITHER PORTAL FRAMED OR 7/16" OSB ON BOTH SIDES WITH A NAILING PATTERN OF 3" ON ALL PANEL EDGES AND 6" IN THE FIELD.





EXTERIOR WALLS (2) 2X10 HEADERS		
CLEAR SPAN FOR HEADER	NUMBER OF STUDS	
	JACKS	KINGS
ALL DOOR & C.O. BELOW 4'	1	1
ALL DOOR & C.O. 4' TO 7'-11"	2	2
ALL DOOR & C.O. 8' AND ABOVE	SIZED BY ENGINEER	

\*\*UNLESS NOTED OTHER WISE\*\*

SECOND FLOOR PLAN  
SCALE: 1/4"=1'-0"

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I HEREBY CERTIFY THAT THIS DRAWING MEETS LOCAL CODES, 2018 INTERNATIONAL BUILDING CODES

THIS IS FOR THE CONSTRUCTION OF ONE HOUSE ON A SINGLE LOT, NOT TO BE REUSED

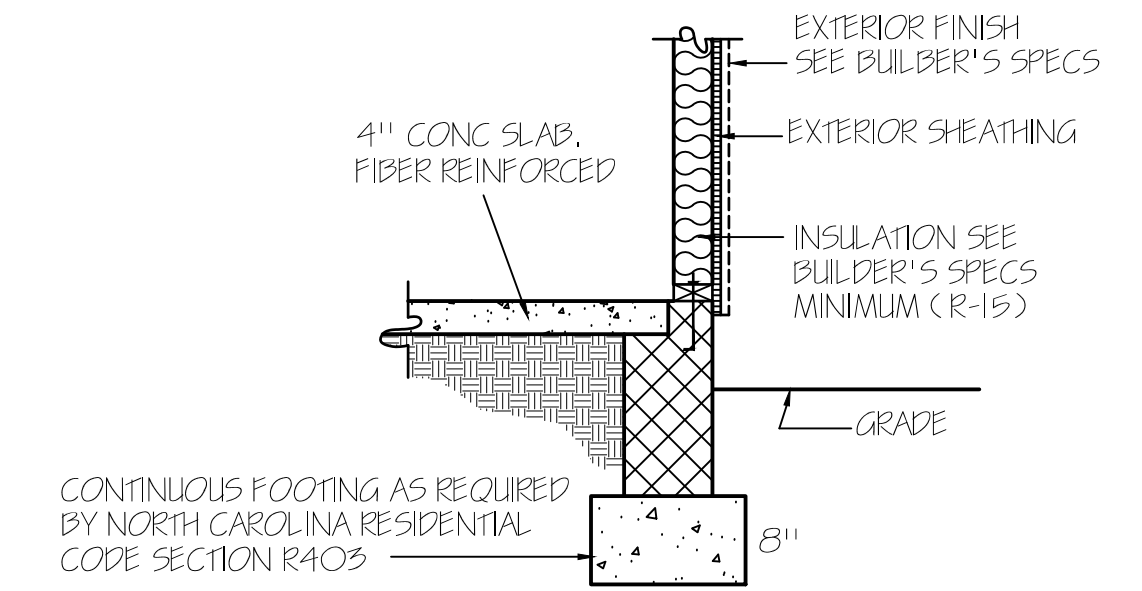
PLAN NUMBER  
RG21-A01

OPTION #6

2	GARAGE	L	F
	DATE:	3/16/23	

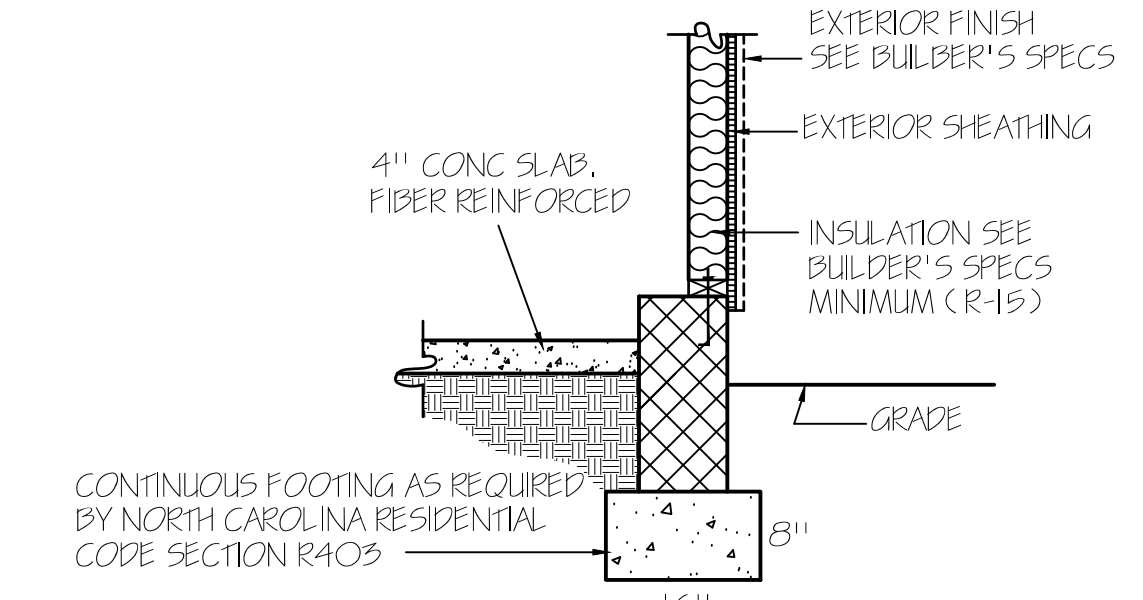
NOTE:  
 FOUNDATION DETAILS SHOWN ARE BASED ON ASSUMED SOIL BEARING CAPACITY OF 2000 PSF. LOCAL SITE CONDITIONS MUST BE INVESTIGATED. ALL FOOTING TO BE LOCATED BELOW FROST DEPTH.

USE ANCHOR BOLTS  
 ANCHOR BOLTS: 1/2" DIA. BOLTS AT 6'-0" O.C. AND NOT MORE THAN 12" FROM CORNERS, EMBEDDED MIN. 7" INTO FOUNDATION. USE A MIN. OF 2 BOLTS PER EACH STUD WALL



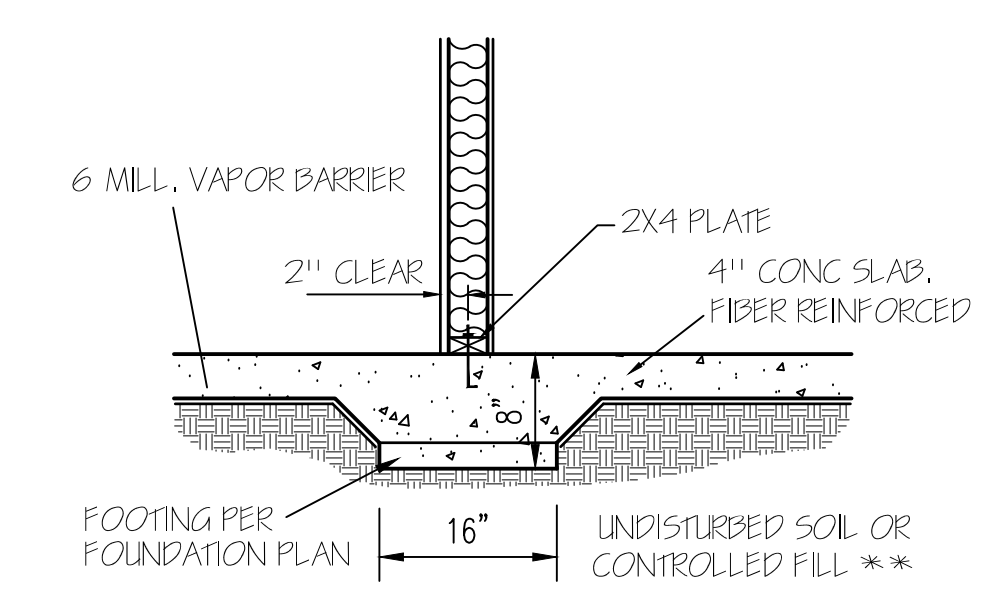
NOTE:  
 PERIMETER INSL. MAY EXTEND HORIZ. UNDER SLAB 24" OR VERTICAL 24" BELOW SLAB FLOOR

CONCRETE SLAB FLOOR (A)



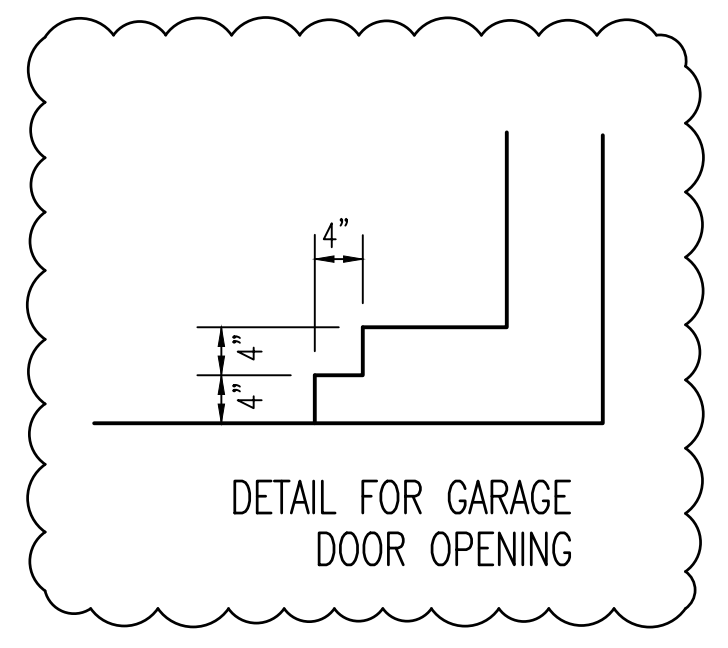
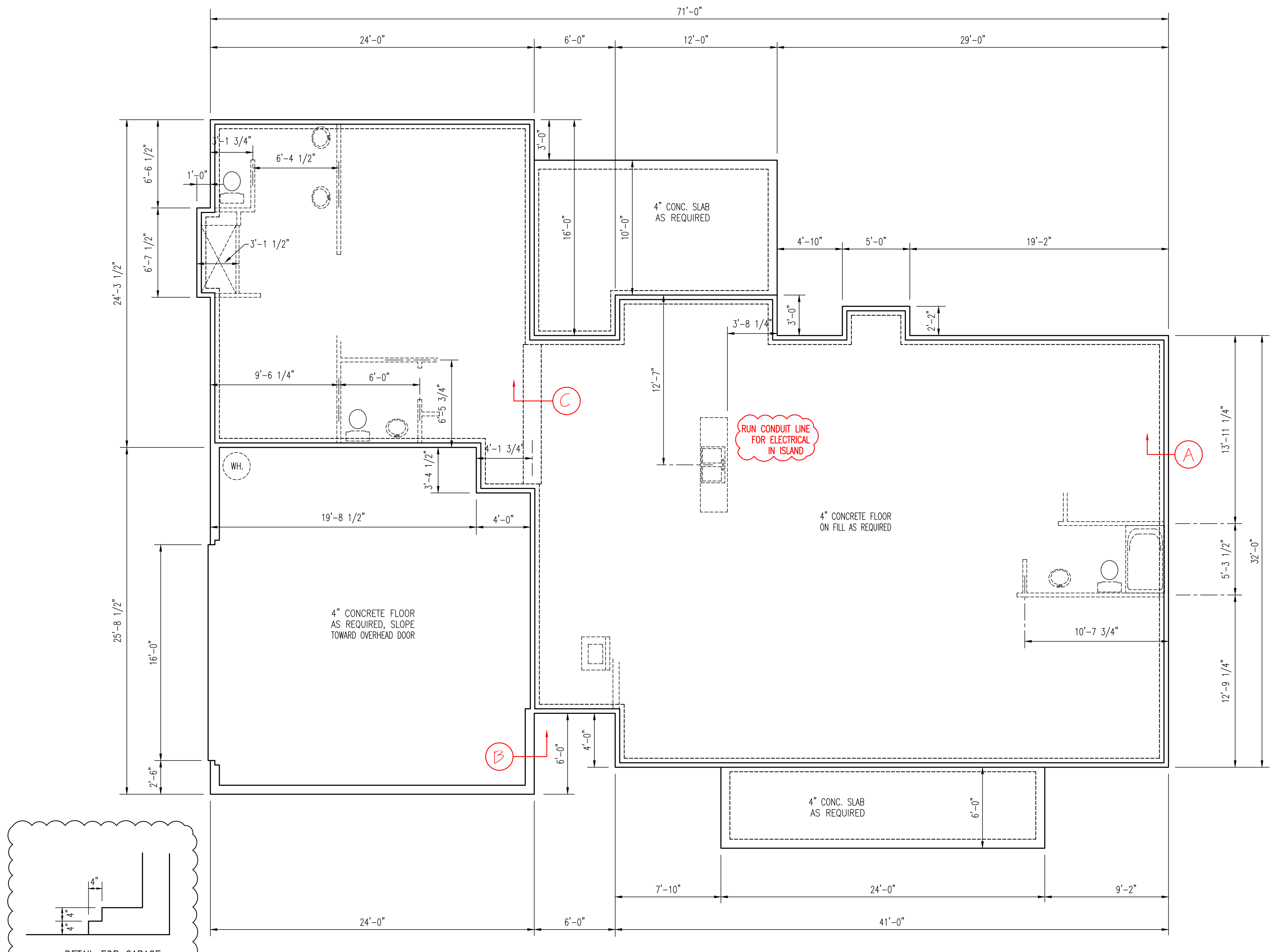
NOTE:  
 PERIMETER INSL. MAY EXTEND HORIZ. UNDER SLAB 24" OR VERTICAL 24" BELOW SLAB FLOOR

GARAGE WALL (B)



LOAD BEARING WALL THICKENED SLAB (C)

FOUNDATION PLAN  
 SCALE: 1/4"=1'-0"



RUN CONDUIT LINE FOR ELECTRICAL IN ISLAND

STEPS:  
 SET BRICK STEPS ON 6" CONCRETE SIDEWALK

**TM DESIGNS**  
 RESIDENTIAL PLANS BY TINA MCFADDEN  
 (910) 354-4736 TMDDESIGNS2016@GMAIL.COM

EXCLUSIVE RESIDENCE DESIGN FOR:  
**WATERMARK HOMES**  
 LOT: 91 SOUTH CREEK  
 NAME: PONDEROSA

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 PLAN NUMBER  
 RG21-A01  
 OPTION #6  
 3 GARAGE L F  
 DATE: 3/16/23



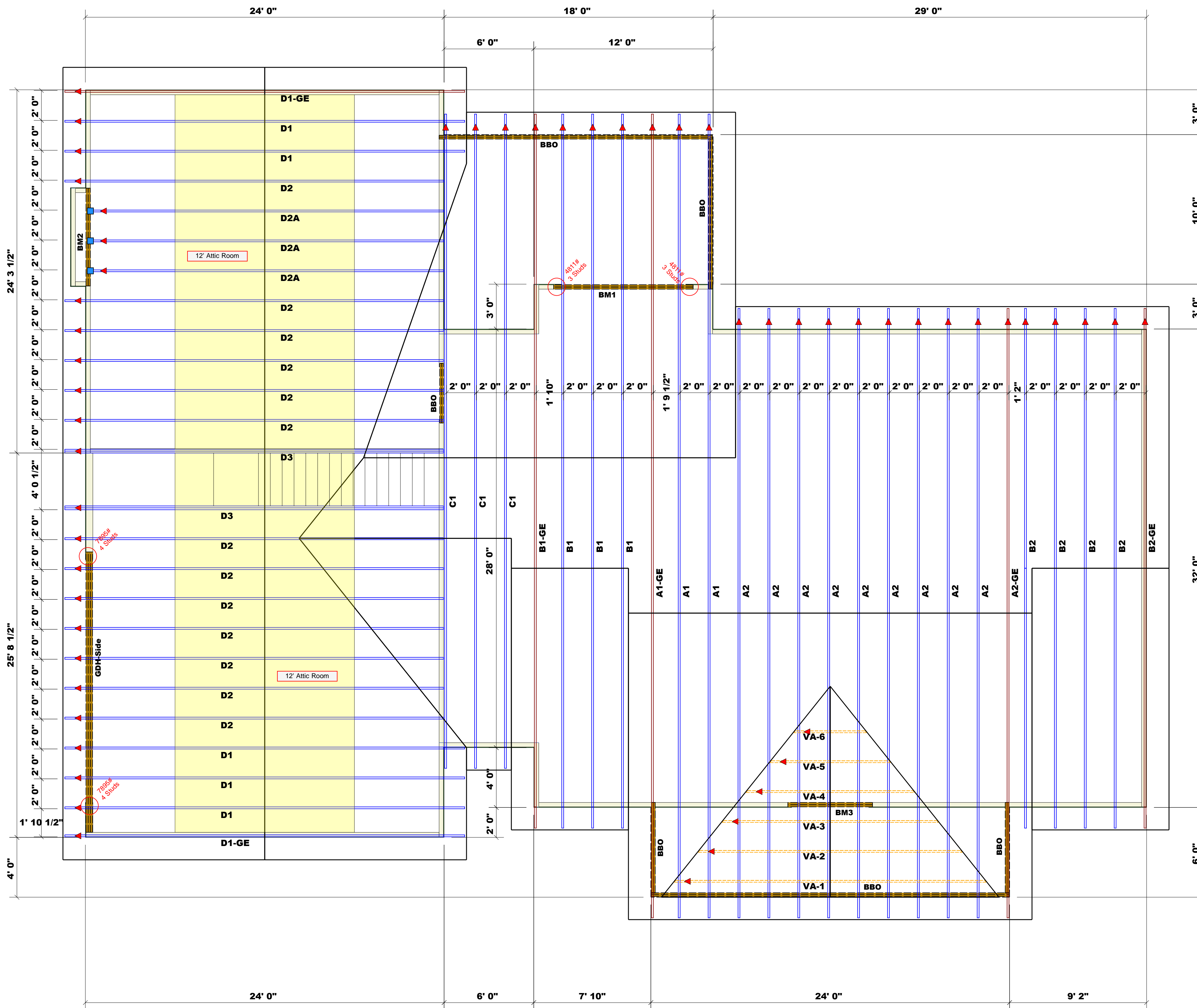
### ROOF & FLOOR TRUSSES & BEAMS

Reilly Road Industrial Park  
Fayetteville, N.C. 28309  
Phone: (910) 864-8787  
Fax: (910) 864-4444

**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. The individual design sheets for each truss design identified on the drawings are the property of the building designer. The building designer is responsible for the design of the truss system and for the overall structure. The design of the truss system and the overall structure, including the design of the roof and floor system, is the responsibility of the building designer. For general guidance regarding trusses, consult ICC-ES and ICC-ES provided with the truss delivery package or visit [www.iccsa.com](http://www.iccsa.com)

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 1500#. 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 1500#.

Signature  
**Anthony Williams**



**Dimension Notes**  
1. All exterior wall to wall dimensions are to face of sheathing unless noted otherwise.  
2. All interior wall dimensions are to face of frame wall unless noted otherwise.  
3. All exterior wall to truss dimensions are to face of frame wall unless noted otherwise.

Roof Area = 4411.57 sq.ft.  
Ridge Line = 111.2 ft.  
Hip Line = 0 ft.  
Horiz. OH = 189.14 ft.  
Raked OH = 323.95 ft.  
Decking = 152 sheets

All Walls Shown Are Considered Load Bearing

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

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

Products					
PlotID	Length	Product	Piles	Net Qty	Fab Type
BM2	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
BM3	6' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2	FF
BM1	10' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2	FF
GDH-Side	19' 0"	1-3/4"x 16" LVL Kerto-S	3	3	FF

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.  
○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

Truss Placement Plan  
SCALE: 1/4" = 1'-0"

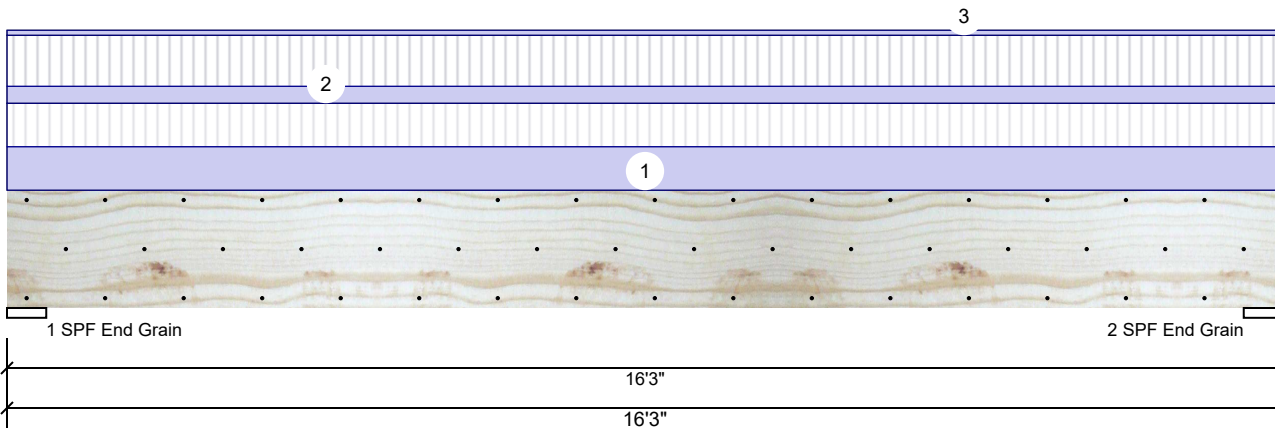
COUNTY	ADDRESS	MODEL	DATE REV.	DRAWN BY	SALESMAN
Hammett County	Lot 91 South Creek / Lillington, NC	Roof	4/4/23	Anthony Williams	Anthony Williams

BUILDER	JOB NAME	PLAN	SEAL DATE	QUOTE #	JOB #
Watermark Homes	Lot 91 South Creek	Ponderosa	3/16/23	NA	J0423-1501

LOAD CHART FOR JACK STUDS					
BASED ON TABLES 802.2.1 & 802.2.2					
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADERS/BEAM			NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADERS/BEAM		
REQ'D STUDS FOR (1) END OF HEADERS/BEAM	REQ'D STUDS FOR (2) END OF HEADERS/BEAM	REQ'D STUDS FOR (3) END OF HEADERS/BEAM	REQ'D STUDS FOR (1) END OF HEADERS/BEAM	REQ'D STUDS FOR (2) END OF HEADERS/BEAM	REQ'D STUDS FOR (3) END OF HEADERS/BEAM
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				

**GDH-SIDE Kerto-S LVL 1.750" X 18.000" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	4574	3283	0	0	0
2	Vertical	4574	3283	0	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	6.000"	Vert	45%	3283 / 4574	7857	L	D+L
2 - SPF End Grain	6.000"	Vert	45%	3283 / 4574	7857	L	D+L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	28651 ft-lb	8'1 1/2"	42981 ft-lb	0.667 (67%)	D+L	L
Unbraced	28651 ft-lb	8'1 1/2"	28662 ft-lb	1.000 (100%)	D+L	L
Shear	5944 lb	2'	13440 lb	0.442 (44%)	D+L	L
LL Defl inch	0.240 (L/771)	8'1 9/16"	0.385 (L/480)	0.623 (62%)	L	L
TL Defl inch	0.412 (L/449)	8'1 9/16"	0.513 (L/360)	0.802 (80%)	D+L	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	259 PLF	259 PLF	0 PLF	0 PLF	0 PLF	D2 ROOF
2	Uniform			Top	101 PLF	304 PLF	0 PLF	0 PLF	0 PLF	D2 FLOOR
3	Uniform			Top	30 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				14 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 11/3/2024

**Manufacturer Info**

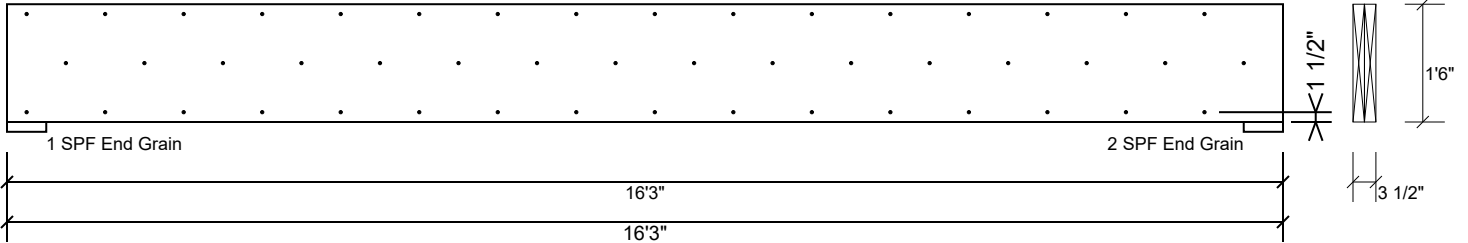
Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

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



**GDH-SIDE Kerto-S LVL 1.750" X 18.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. 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 11/3/2024

**Manufacturer Info**

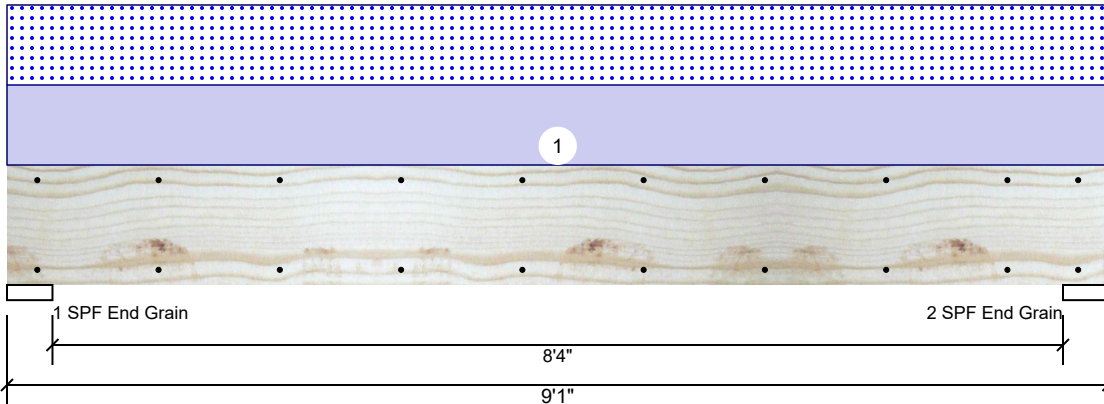
Metsä Wood  
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[www.metsawood.com/us](http://www.metsawood.com/us)

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



**BM1 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 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2426	2384	0	0
2	Vertical	0	2426	2384	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	Vert	36%	2426 / 2384	4811	L	D+S
2 - SPF End Grain	4.500"	Vert	36%	2426 / 2384	4811	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9473 ft-lb	4'6 1/2"	22897 ft-lb	0.414 (41%)	D+S	L
Unbraced	9473 ft-lb	4'6 1/2"	10675 ft-lb	0.887 (89%)	D+S	L
Shear	3374 lb	1'4 3/8"	10197 lb	0.331 (33%)	D+S	L
LL Defl inch	0.075 (L/1355)	4'6 9/16"	0.211 (L/480)	0.354 (35%)	S	L
TL Defl inch	0.151 (L/672)	4'6 9/16"	0.282 (L/360)	0.536 (54%)	D+S	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	525 PLF	0 PLF	525 PLF	0 PLF	0 PLF	B1
	Self Weight				9 PLF					

**Notes**

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

**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 11/3/2024

**Manufacturer Info**

Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

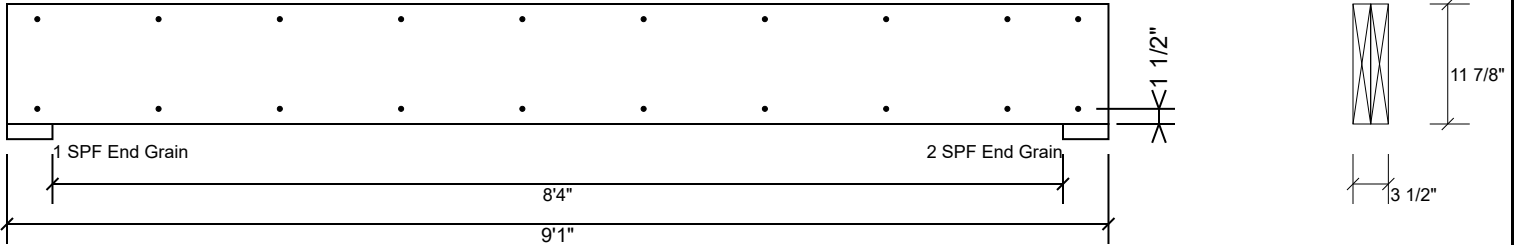
Comtech, Inc.  
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 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS





**BM1 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**

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 11/3/2024

**Manufacturer Info**

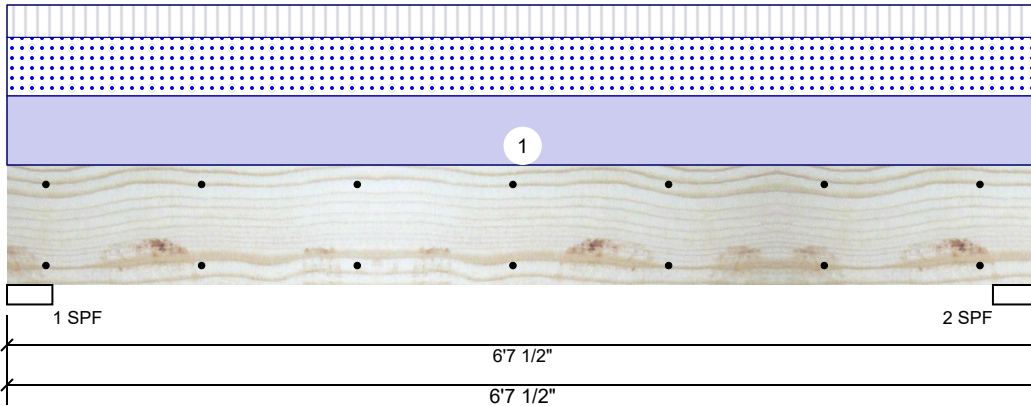
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 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)

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



**BM2 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 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	513	1120	928	0	0
2	Vertical	513	1120	928	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	42%	1120 / 1081	2201	L	D+0.75(L+S)
2 - SPF	3.500"	Vert	42%	1120 / 1081	2201	L	D+0.75(L+S)

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3158 ft-lb	3'3 3/4"	14423 ft-lb	0.219 (22%)	D+0.75(L+S)	L
Unbraced	3158 ft-lb	3'3 3/4"	10411 ft-lb	0.303 (30%)	D+0.75(L+S)	L
Shear	1501 lb	5'6 3/4"	7943 lb	0.189 (19%)	D+0.75(L+S)	L
LL Defl inch	0.029 (L/2595)	3'3 3/4"	0.154 (L/480)	0.185 (18%)	0.75(L+S)	L
TL Defl inch	0.058 (L/1274)	3'3 3/4"	0.206 (L/360)	0.282 (28%)	D+0.75(L+S)	L

**Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	331 PLF	155 PLF	280 PLF	0 PLF	0 PLF	D2A
	Self Weight				7 PLF					

**Notes**

Calculated Structural 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 11/3/2024

**Manufacturer Info**

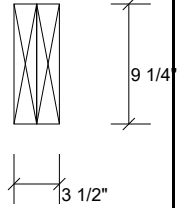
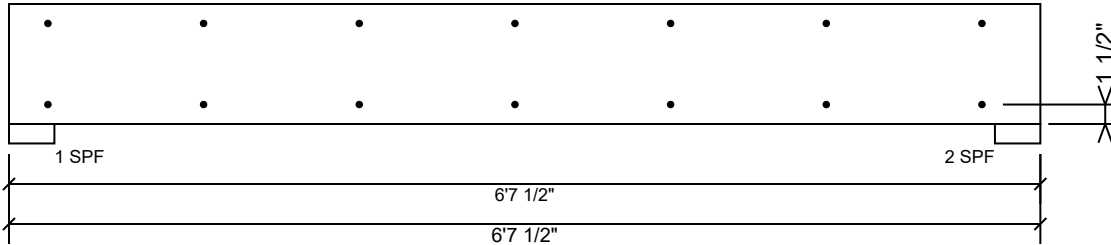
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**BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

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**

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

chemicals

**Handling & Installation**

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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 11/3/2024

**Manufacturer Info**

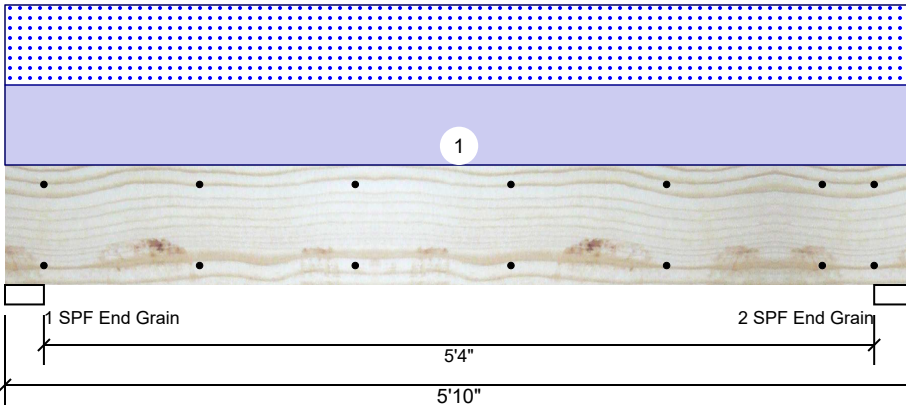
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**BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED lb (Uplift)**

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1479	1458	0	0
2	Vertical	0	1479	1458	0	0

**Bearings**

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	33%	1479 / 1458	2938	L	D+S
2 - SPF End Grain	3.000"	Vert	33%	1479 / 1458	2938	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3751 ft-lb	2'11"	14423 ft-lb	0.260 (26%)	D+S	L
Unbraced	3751 ft-lb	2'11"	11110 ft-lb	0.338 (34%)	D+S	L
Shear	1915 lb	4'9 3/4"	7943 lb	0.241 (24%)	D+S	L
LL Defl inch	0.028 (L/2318)	2'11"	0.136 (L/480)	0.207 (21%)	S	L
TL Defl inch	0.057 (L/1151)	2'11"	0.182 (L/360)	0.313 (31%)	D+S	L

**Design Notes**

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
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- 8 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	500 PLF	0 PLF	500 PLF	0 PLF	0 PLF	A2
	Self Weight				7 PLF					

**Notes**

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**Lumber**

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**Handling & Installation**

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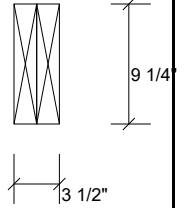
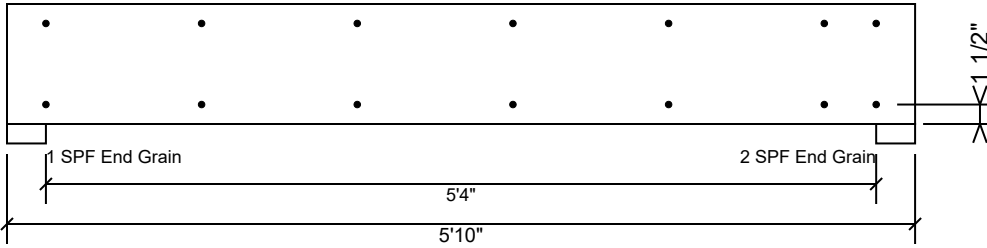
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Level: Level



**Multi-Ply Analysis**

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

**Notes**

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**Lumber**

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