

RE: 2412-1523-A - The Farm at Neills Creek Lot 00.0045 Roof

Trenco
 818 Soundside Rd
 Edenton, NC 27932

Site Information:

Project Customer: DRB Raleigh Project Name: The Farm at Neills Creek Lot 00.0045
 Lot/Block: 00.0045 Subdivision: The Farm at Neills Creek
 Model: Cooper 3
 Address: 530 Winding Creek Dr
 City: Lillington State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 8.8
 Wind Code: ASCE 7-16 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
 Wind Speed: 120 mph Floor Load: N/A psf
 Roof Load: 40.0 psf Exposure Category: B
 Mean Roof Height (feet): 25

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I70445462	D1	12/31/24	35	I70445496	A1G	12/31/24
2	I70445463	VD1	12/31/24	36	I70445497	A1	12/31/24
3	I70445464	VA1	12/31/24	37	I70445498	A1A	12/31/24
4	I70445465	V5	12/31/24	38	I70445499	A1T	12/31/24
5	I70445466	PB3	12/31/24				
6	I70445467	VA2	12/31/24				
7	I70445468	P1	12/31/24				
8	I70445469	P1G	12/31/24				
9	I70445470	PB2	12/31/24				
10	I70445471	V6	12/31/24				
11	I70445472	P2A	12/31/24				
12	I70445473	P2G	12/31/24				
13	I70445474	T2	12/31/24				
14	I70445475	VA3	12/31/24				
	I70445476	C1G	12/31/24				
16	I70445477	C1	12/31/24				
17	I70445478	C1A	12/31/24				
18	I70445479	B2	12/31/24				
19	I70445480	B2G	12/31/24				
20	I70445481	B1G	12/31/24				
21	I70445482	B1	12/31/24				
22	I70445483	P2	12/31/24				
23	I70445484	VA4	12/31/24				
	I70445485	VG4	12/31/24				
25	I70445486	PB1G	12/31/24				
26	I70445487	PB1	12/31/24				
27	I70445488	G1G	12/31/24				
28	I70445489	G1	12/31/24				
29	I70445490	G1A	12/31/24				
30	I70445491	T1A	12/31/24				
31	I70445492	T1	12/31/24				
32	I70445493	T1G	12/31/24				
	I70445494	B2T	12/31/24				
34	I70445495	B2A	12/31/24				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Structural, LLC.

Truss Design Engineer's Name: Gilbert, Eric
 My license renewal date for the state of North Carolina is December 31, 2025.

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.



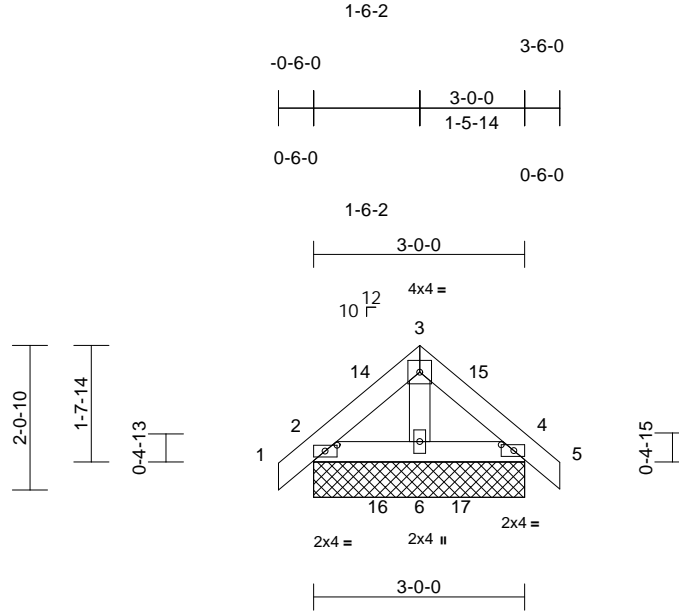
December 31, 2024

Job 2412-1523-A	Truss D1	Truss Type Common Supported Gable	Qty 12	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)
					170445462

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:34
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Page: 1



Scale = 1:21.8

Plate Offsets (X, Y): [2:0-2-1,0-1-0], [4:0-2-2,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 14 lb	FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-0-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=3-0-0, 4=3-0-0, 6=3-0-0
Max Horiz 2=-27 (LC 14)
Max Uplift 2=-1 (LC 16), 4=-4 (LC 17)
Max Grav 2=296 (LC 53), 4=296 (LC 61), 6=307 (LC 59)

FORCES

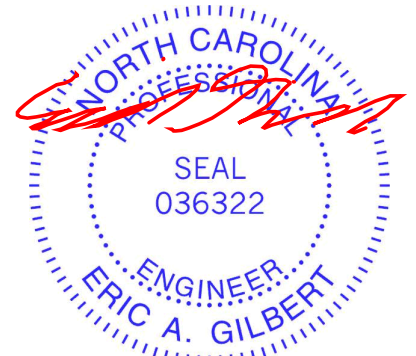
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-140/57, 3-4=-143/51, 4-5=0/26
BOT CHORD 2-6=-8/62, 4-6=-8/62
WEBS 3-6=-183/2

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 2, 4 lb uplift at joint 4, 1 lb uplift at joint 2 and 4 lb uplift at joint 4.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



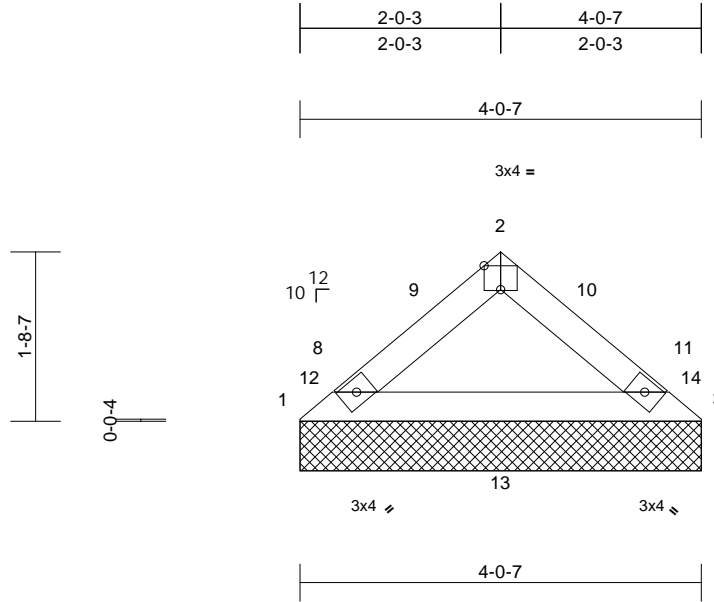
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0045 Roof
2412-1523-A	VD1	Valley	2	1	Job Reference (optional)
					I70445463

Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:16.1

Plate Offsets (X, Y): [2:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.56	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
										Weight: 12 lb	FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=4-0-7, 3=4-0-7
 Max Horiz 1=24 (LC 14)
 Max Grav 1=334 (LC 47), 3=334 (LC 51)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-408/76, 2-3=-408/76
 BOT CHORD 1-3=-54/306

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Plates checked for a plus or minus 5 degree rotation about its center.
- 7) Gable requires continuous bottom chord bearing.
- 8) Gable studs spaced at 4-0-0 oc.

- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 11) All bearings are assumed to be SP No.3 .
- 12) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 13) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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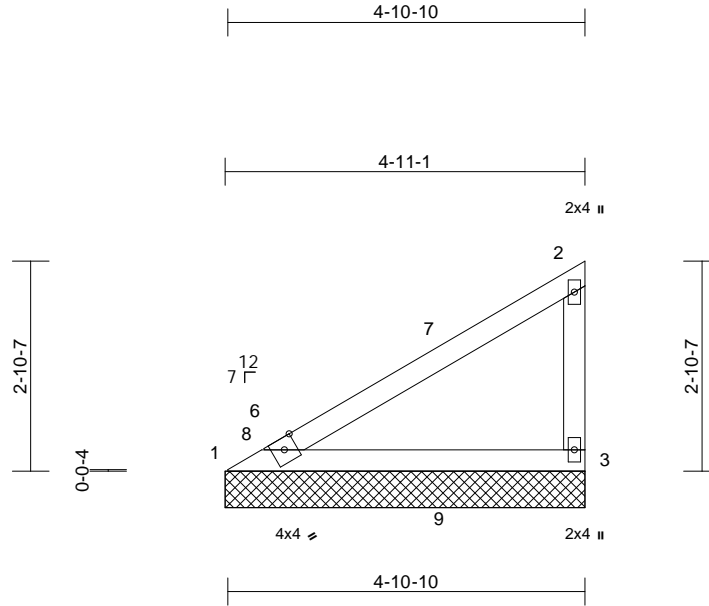
818 Soundside Road
 Edenton, NC 27932

Job 2412-1523-A	Truss VA1	Truss Type Valley	Qty 2	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445464
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Structural, LLC, Thurmont, MD - 21788,

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Scale = 1:30.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.65	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 18 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.

BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=4-11-1, 3=4-11-1

Max Horiz 1=63 (LC 13)
Max Uplift 3=-2 (LC 16)
Max Grav 1=349 (LC 42), 3=349 (LC 41)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-518/88, 2-3=-300/83
BOT CHORD 1-3=-116/446

NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-9-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.

- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SP No.2.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 3.
- 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



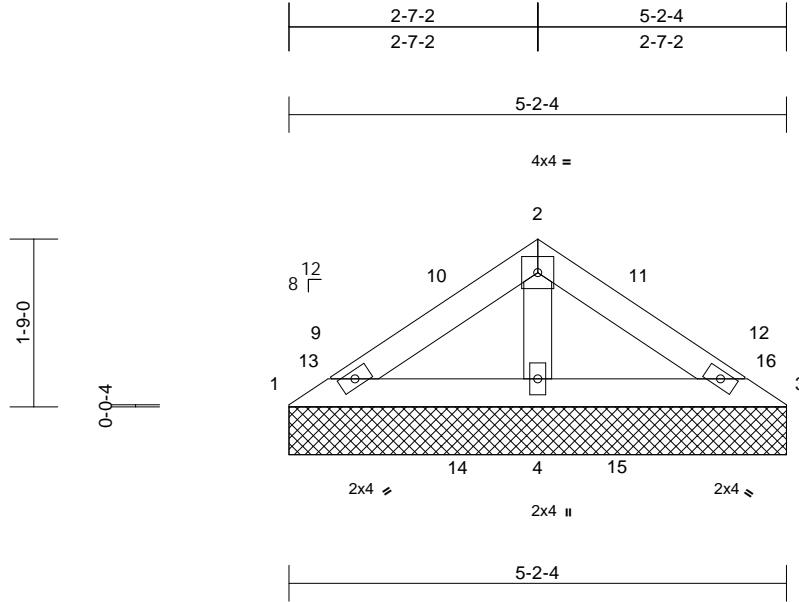
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss V5	Truss Type Valley	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445465
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:16.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 17 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.3
- OTHERS 2x4 SP No.3

BRACING

- TOP CHORD Structural wood sheathing directly applied.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 1=5-2-4, 3=5-2-4, 4=5-2-4
- Max Horiz 1=-25 (LC 12)
- Max Uplift 1=-27 (LC 50), 3=-27 (LC 48)
- Max Grav 1=278 (LC 47), 3=278 (LC 51), 4=410 (LC 57)

FORCES

(lb) - Maximum Compression/Maximum Tension

- TOP CHORD 1-2=-215/178, 2-3=-215/178
- BOT CHORD 1-4=-112/162, 3-4=-112/162
- WEBS 2-4=-305/79

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 27 lb uplift at joint 3.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

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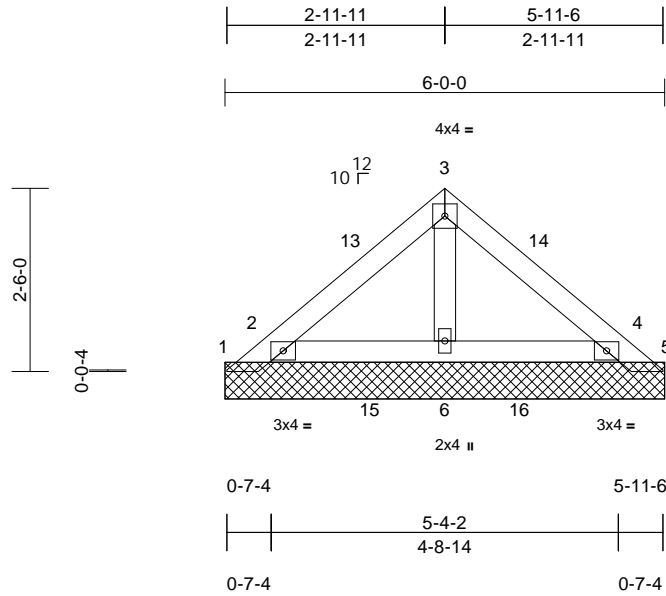
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss PB3	Truss Type Piggyback	Qty 11	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445466
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:40
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Page: 1



Loading (psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.22	Vert(LL) n/a	-	-	n/a	999	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Lumber DOL 1.15		BC 0.33	Vert(TL) n/a	-	-	n/a	999		
TCDL 10.0	Rep Stress Incr YES		WB 0.04	Horiz(TL) 0.00	10	-	n/a	n/a		
BCLL 0.0*	Code IRC2021/TPI2014		Matrix-AS							
BCDL 10.0									Weight: 21 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size)
1=6-0-0, 2=6-0-0, 4=6-0-0, 5=6-0-0, 6=6-0-0
Max Horiz 1=-37 (LC 14)
Max Uplift 1=-236 (LC 46), 2=-27 (LC 16), 4=-23 (LC 17), 5=-234 (LC 47)
Max Grav 1=217 (LC 44), 2=476 (LC 46), 4=466 (LC 47), 5=219 (LC 56), 6=328 (LC 63)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-60/163, 2-3=-157/91, 3-4=-157/89, 4-5=-43/161

BOT CHORD 2-6=-82/54, 4-6=-82/54

WEBS 3-6=-197/3

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 236 lb uplift at joint 1 and 234 lb uplift at joint 5.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



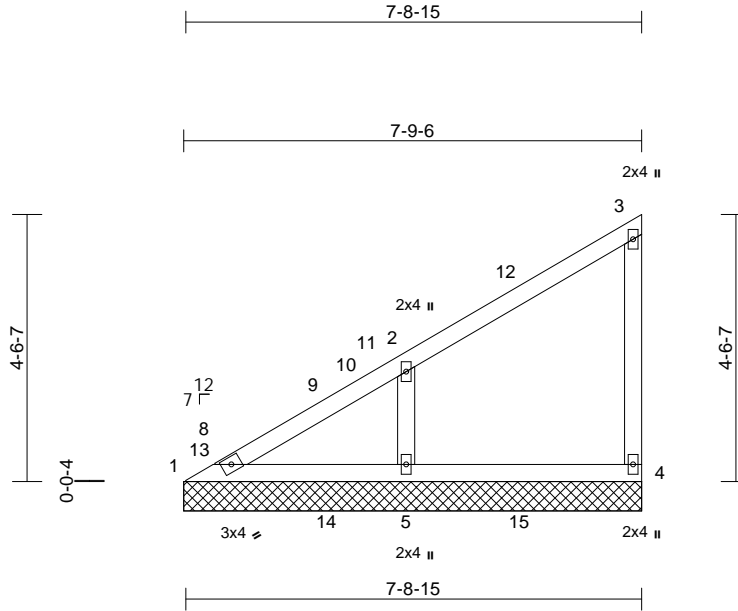
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss VA2	Truss Type Valley	Qty 2	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445467
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:43
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 32 lb	FT = 20%

LUMBER
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.3
 WEBS 2x4 SP No.3
 OTHERS 2x4 SP No.3

BRACING
 TOP CHORD Structural wood sheathing directly applied, except end verticals.
 BOT CHORD Rigid ceiling directly applied.

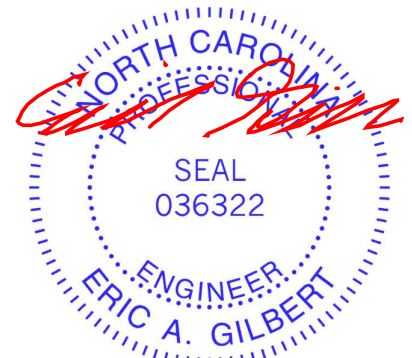
REACTIONS (size) 1=7-9-6, 4=7-9-6, 5=7-9-6
 Max Horiz 1=105 (LC 13)
 Max Uplift 4=-7 (LC 13), 5=-18 (LC 16)
 Max Grav 1=310 (LC 43), 4=311 (LC 51), 5=443 (LC 50)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-390/150, 2-3=-101/85, 3-4=-282/82
 BOT CHORD 1-5=-78/335, 4-5=-61/66
 WEBS 2-5=-347/142

- NOTES**
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 7-7-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - 4) Unbalanced snow loads have been considered for this design.

- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SP No.3 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 4 and 18 lb uplift at joint 5.
- 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
 A MiTek Affiliate

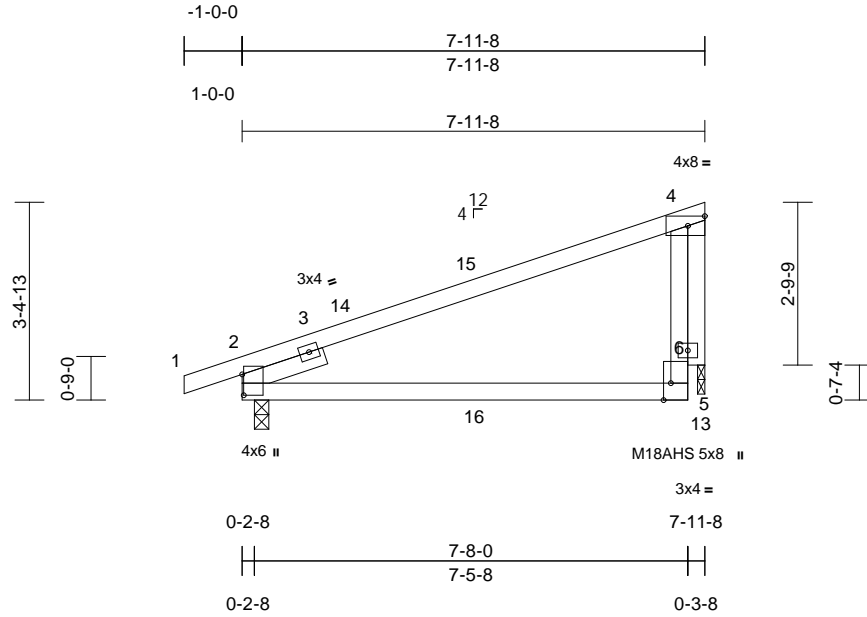
818 Soundside Road
 Edenton, NC 27932

Job 2412-1523-A	Truss P1	Truss Type Monopitch	Qty 6	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445468
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:26.9

Plate Offsets (X, Y): [2:0-4-5,0-0-5], [5:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.16	5-11	>607	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.21	5-11	>441	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.07	5-11	>999	240		
BCDL	10.0											
											Weight: 36 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.2
- OTHERS 2x4 SP No.3
- SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 2=0-3-0, 13=0-1-8
- Max Horiz 2=59 (LC 12)
- Max Uplift 2=-62 (LC 12), 13=-53 (LC 12)
- Max Grav 2=451 (LC 47), 13=375 (LC 43)

FORCES

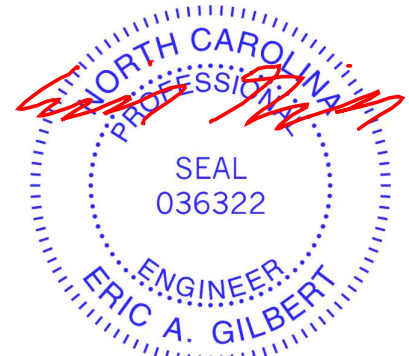
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/26, 2-4=-396/224, 5-6=-65/331, 4-6=-194/326
- BOT CHORD 2-5=-163/202
- WEBS 4-13=-382/46

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 13 SP No.3.
- Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



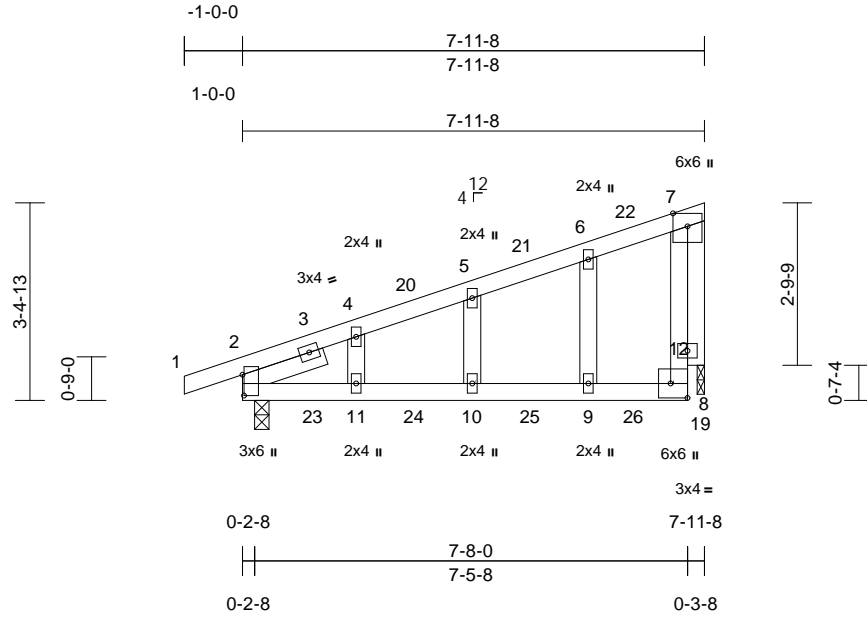
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss P1G	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445469
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:38
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Page: 1



Scale = 1:26.9

Plate Offsets (X, Y): [2:0-4-5,0-0-5], [8:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.10	10-11	>989	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.15	10-11	>616	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.09	10-11	>999	240		
BCDL	10.0										Weight: 42 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.2
- OTHERS 2x4 SP No.3
- SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 2=0-3-0, 19=0-1-8
- Max Horiz 2=59 (LC 12)
- Max Uplift 2=62 (LC 12), 19=53 (LC 2)
- Max Grav 2=451 (LC 53), 19=375 (LC 65)

FORCES

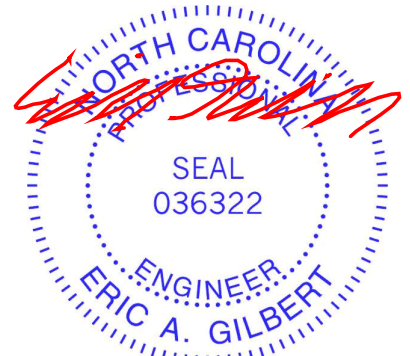
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/26, 2-4=-243/139, 4-5=-243/69, 5-6=-240/90, 6-7=-174/102, 8-12=-104/319, 7-12=-42/148
- BOT CHORD 2-11=-151/203, 10-11=-151/203, 9-10=-151/203, 8-9=-151/203
- WEBS 6-9=-103/145, 5-10=-134/116, 4-11=-118/131, 7-19=-269/150

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 1-11-8, Interior (1) 1-11-8 to 7-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 19 SP No.3.
- Bearing at joint(s) 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 19.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 19. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



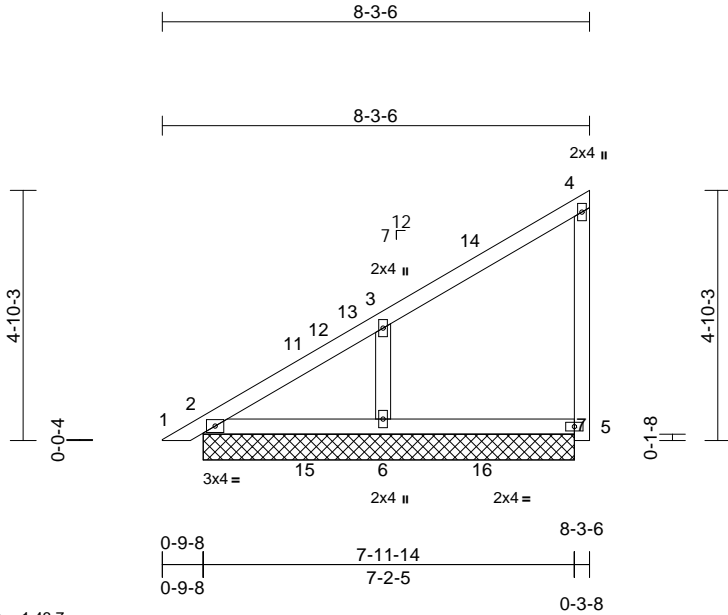
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss PB2	Truss Type Piggyback	Qty 3	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445470
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:40
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Page: 1



Scale = 1:43.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS							
BCDL	10.0									Weight: 34 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
REACTIONS (size)	
2=7-2-5, 5=7-2-5, 6=7-2-5, 7=7-2-5	
Max Horiz	2=115 (LC 15)
Max Uplift	5=-6 (LC 13), 6=-24 (LC 16)
Max Grav	2=315 (LC 47), 5=313 (LC 53), 6=436 (LC 52)

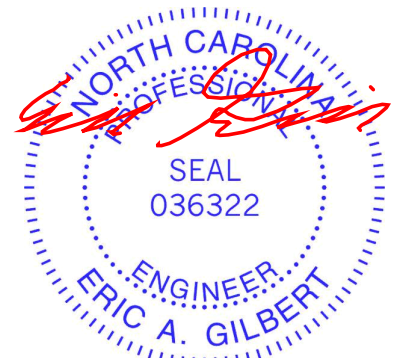
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/21, 2-3=-174/150, 3-4=-101/87, 5-7=0/0, 4-5=-283/69
BOT CHORD	2-6=-72/78, 5-6=-72/78
WEBS	3-6=-343/126

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 8-2-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 5.
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

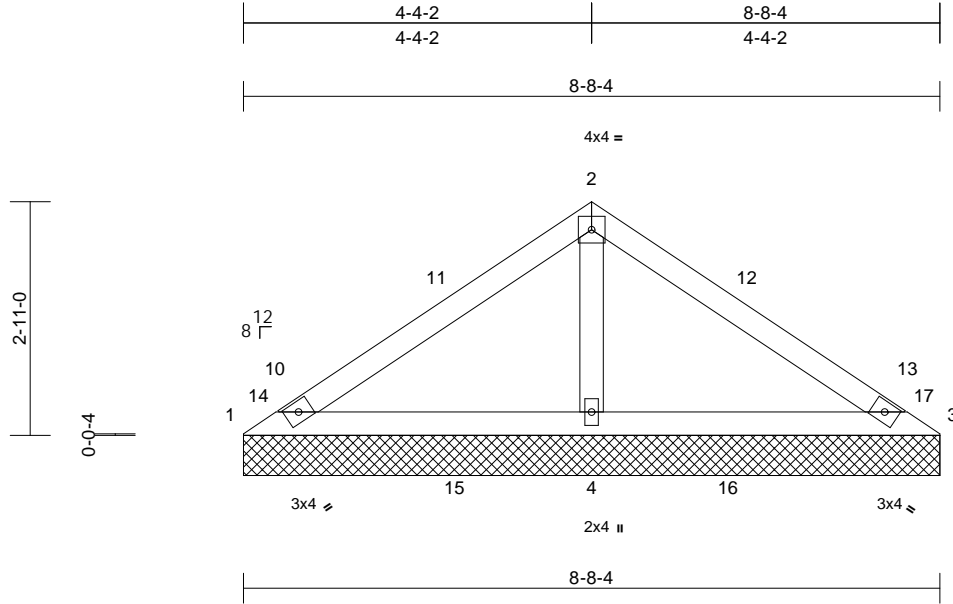
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss V6	Truss Type Valley	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445471
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:42
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.73	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	-0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
										Weight: 30 lb	FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=8-8-4, 3=8-8-4, 4=8-8-4
Max Horiz 1=-44 (LC 12)
Max Uplift 1=-251 (LC 51), 3=-2 (LC 51)
Max Grav 1=252 (LC 47), 3=5 (LC 54), 4=853 (LC 51)

FORCES

(lb) - Maximum Compression/Maximum Tension

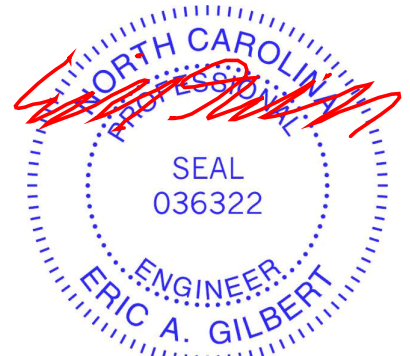
TOP CHORD 1-2=-296/673, 2-3=-127/674
BOT CHORD 1-4=-554/242, 3-4=-556/121
WEBS 2-4=-781/140

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 4-4-8, Exterior(2R) 4-4-8 to 7-4-8, Interior (1) 7-4-8 to 8-8-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 251 lb uplift at joint 1, 2 lb uplift at joint 3 and 2 lb uplift at joint 3.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



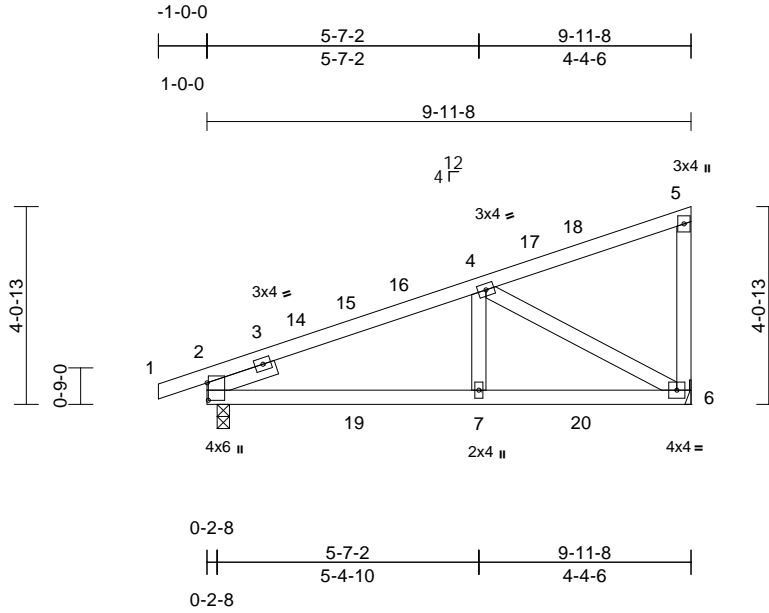
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss P2A	Truss Type Monopitch	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445472
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:38
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Scale = 1:41.5

Plate Offsets (X, Y): [2:0-4-5,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.07	7-12	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.09	7-12	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	7-12	>999	240		
BCDL	10.0										Weight: 49 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

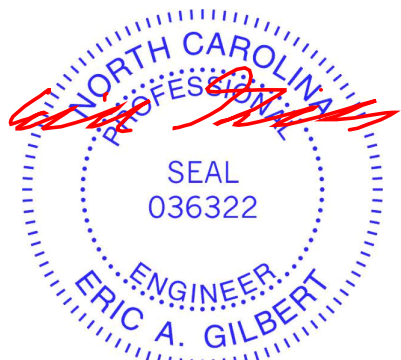
REACTIONS (size) 2=0-3-0, 6= Mechanical
Max Horiz 2=96 (LC 15)
Max Uplift 2=-80 (LC 12), 6=-64 (LC 12)
Max Grav 2=487 (LC 40), 6=441 (LC 44)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-522/247, 4-5=-87/55, 5-6=-289/73
BOT CHORD 2-7=-323/460, 6-7=-323/460
WEBS 4-6=-502/316, 4-7=-58/325

- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 6.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 9-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.



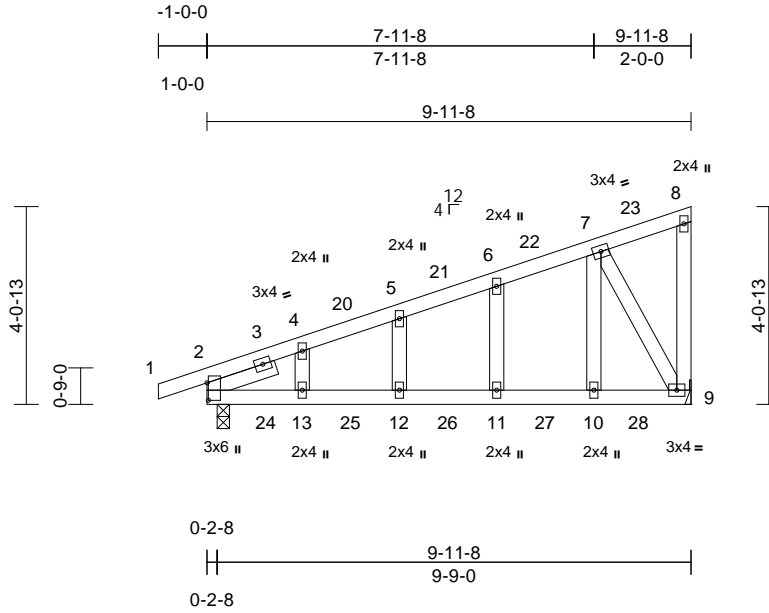
December 31, 2024

Job 2412-1523-A	Truss P2G	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445473
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:41.5

Plate Offsets (X, Y): [2:0-4-5,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.12	12-13	>997	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.19	12-13	>609	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.04	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.10	12-13	>999	240		
BCDL	10.0										Weight: 55 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.3
- OTHERS 2x4 SP No.3
- SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 2=0-3-0, 9= Mechanical
- Max Horiz 2=96 (LC 15)
- Max Uplift 2=-80 (LC 12), 9=-64 (LC 12)
- Max Grav 2=487 (LC 55), 9=441 (LC 47)

FORCES

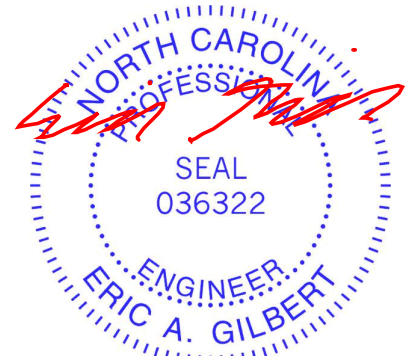
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/26, 2-4=-391/154, 4-5=-381/165, 5-6=-364/181, 6-7=-337/198, 7-8=-76/64, 8-9=-210/124
- BOT CHORD 2-13=-242/338, 12-13=-242/338, 11-12=-242/338, 10-11=-242/338, 9-10=-242/338
- WEBS 7-10=-186/389, 6-11=-120/129, 5-12=-132/118, 4-13=-108/141, 7-9=-682/413

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 1-11-8, Interior (1) 1-11-8 to 9-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2 .
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 9.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacomponents.com)



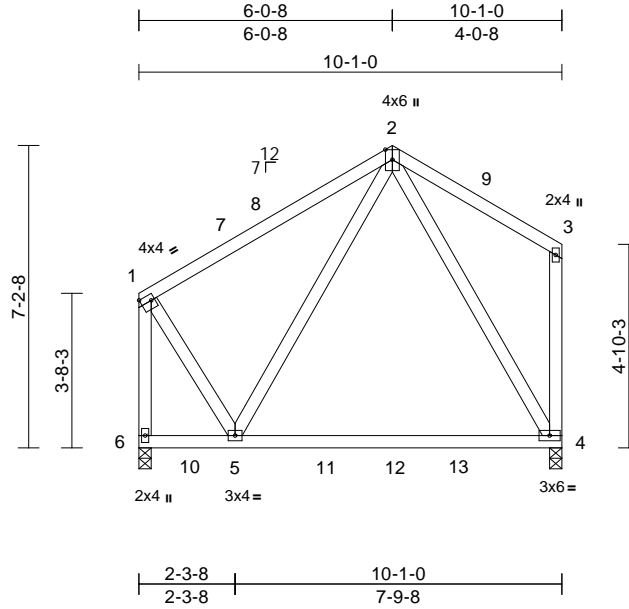
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss T2	Truss Type Common	Qty 3	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445474
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:50.3

Plate Offsets (X, Y): [1:Edge,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.20	4-5	>601	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.27	4-5	>440	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.01	4-5	>999	240		
BCDL	10.0										Weight: 72 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 4=0-3-8, 6=0-3-8
Max Horiz 6=146 (LC 13)
Max Grav 4=475 (LC 33), 6=457 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-336/86, 2-3=-155/137, 1-6=-593/62, 3-4=-293/103

BOT CHORD 5-6=-210/204, 4-5=-122/248

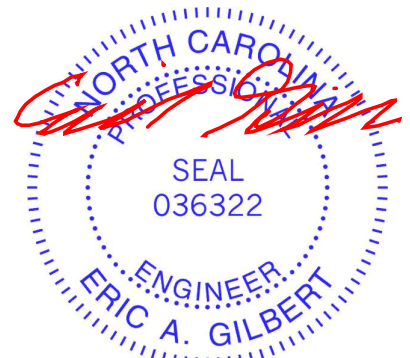
WEBS 2-4=-361/158, 2-5=-45/161, 1-5=0/335

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 4-8-15 to 7-8-15, Interior (1) 7-8-15 to 10-7-11, Exterior(2R) 10-7-11 to 13-7-11, Interior (1) 13-7-11 to 14-6-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



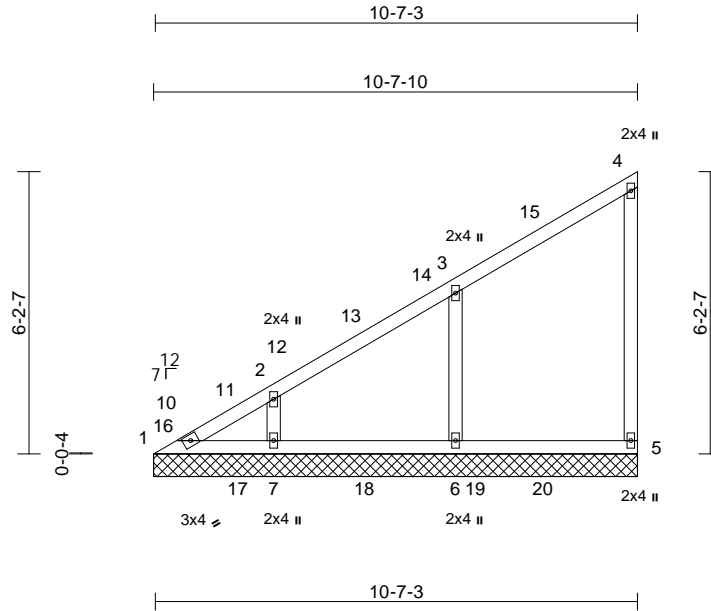
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss VA3	Truss Type Valley	Qty 2	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445475
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:43
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Page: 1



Scale = 1:50.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.79	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 48 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=10-7-10, 5=10-7-10, 6=10-7-10, 7=10-7-10
Max Horiz 1=146 (LC 13)
Max Uplift 1=-2 (LC 12), 5=-10 (LC 13), 6=-24 (LC 16), 7=-8 (LC 16)
Max Grav 1=291 (LC 44), 5=317 (LC 55), 6=440 (LC 33), 7=397 (LC 53)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-300/185, 2-3=-209/159, 3-4=-121/95, 4-5=-284/76
BOT CHORD 1-7=-90/253, 6-7=-80/91, 5-6=-80/91
WEBS 3-6=-338/146, 2-7=-323/95

- NOTES**
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 10-5-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP No.3 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 5, 2 lb uplift at joint 1, 24 lb uplift at joint 6 and 8 lb uplift at joint 7.
- 12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.
- 13) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 14) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MITek Affiliate

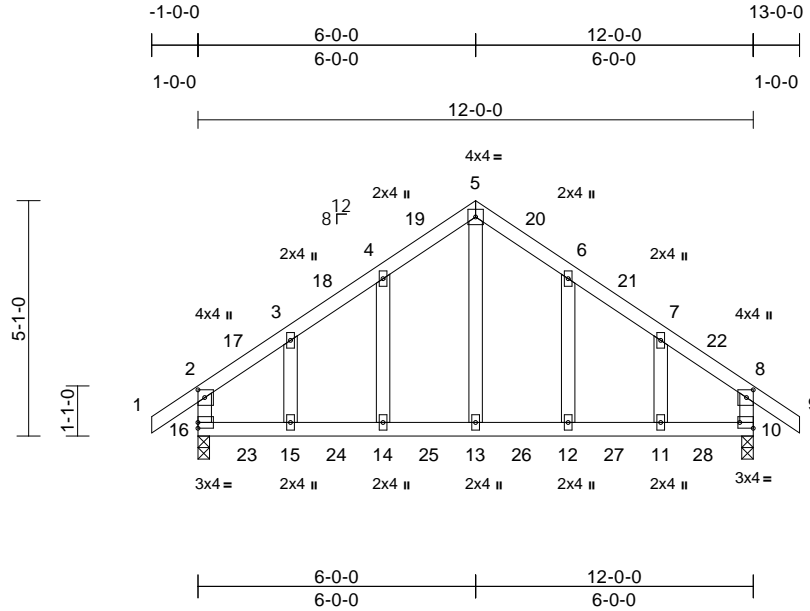
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss C1G	Truss Type Common Supported Gable	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445476
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:34
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Page: 1



Scale = 1:43.7

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [8:0-2-0,0-1-12], [10:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.09	14-15	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.11	14-15	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.01	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.04	14-15	>999	240		
BCDL	10.0										Weight: 67 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 10=0-3-0, 16=0-3-0
 Max Horiz 16=95 (LC 15)
 Max Grav 10=537 (LC 2), 16=537 (LC 2)

FORCES

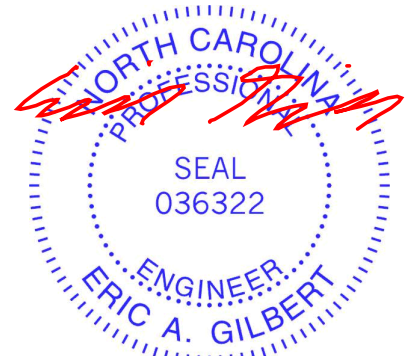
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 2-16=-449/180, 1-2=0/52, 2-3=-462/167, 3-4=-408/189, 4-5=-397/224, 5-6=-397/223, 6-7=-408/189, 7-8=-462/167, 8-9=0/52, 8-10=-449/180
 BOT CHORD 15-16=-74/313, 14-15=-74/313, 13-14=-74/313, 12-13=-74/313, 11-12=-74/313, 10-11=-74/313
 WEBS 5-13=-139/319, 4-14=-143/105, 3-15=-125/125, 6-12=-143/105, 7-11=-125/125

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



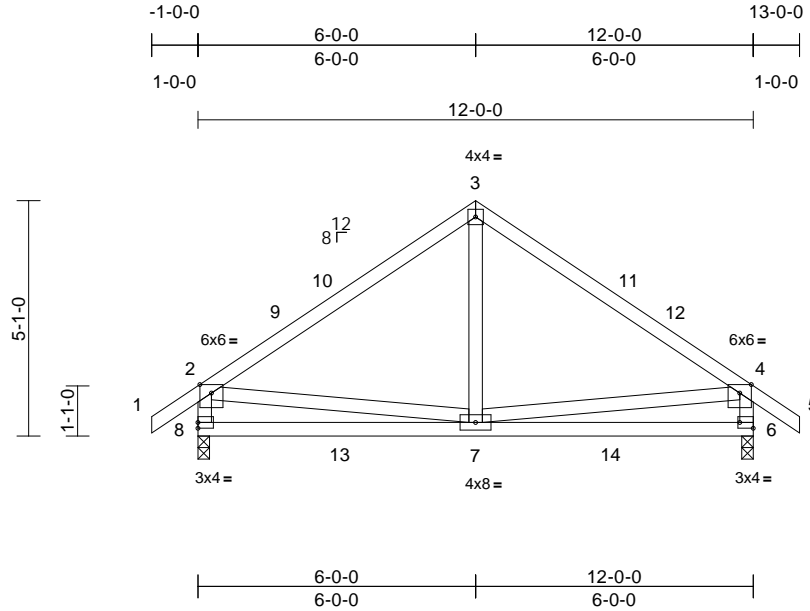
818 Soundside Road
 Edenton, NC 27932

Job 2412-1523-A	Truss C1	Truss Type Common	Qty 4	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445477
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:33
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Page: 1



Scale = 1:43.7

Plate Offsets (X, Y): [6:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.12	7-8	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.14	7-8	>977	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	7-8	>999	240		
BCDL	10.0										Weight: 69 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 6=0-3-0, 8=0-3-0
Max Horiz 8=95 (LC 15)
Max Grav 6=537 (LC 2), 8=537 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-484/199, 3-4=-484/199, 4-5=0/52, 2-8=-482/198, 4-6=-482/198
BOT CHORD 7-8=-130/323, 6-7=-98/323
WEBS 3-7=-79/314, 2-7=-71/216, 4-7=-71/216

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 13-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



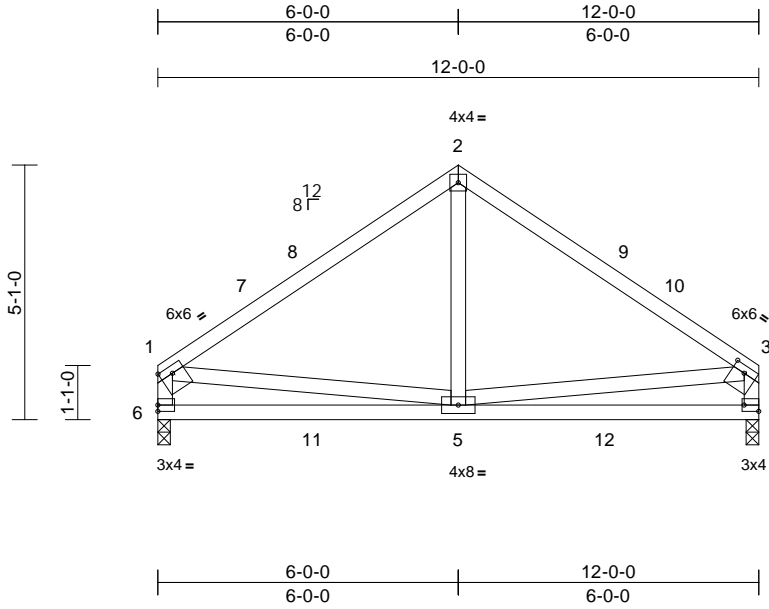
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss C1A	Truss Type Common	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445478
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:34
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Page: 1



Scale = 1:41.8

Plate Offsets (X, Y): [1:Edge,0-1-12], [3:Edge,0-1-12], [4:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.12	5-6	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.14	5-6	>977	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.02	5-6	>999	240		
BCDL	10.0										Weight: 65 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 4=0-3-0, 6=0-3-0
Max Horiz 6=82 (LC 56)
Max Uplift 4=-36 (LC 50), 6=-36 (LC 51)
Max Grav 4=487 (LC 90), 6=487 (LC 87)

FORCES

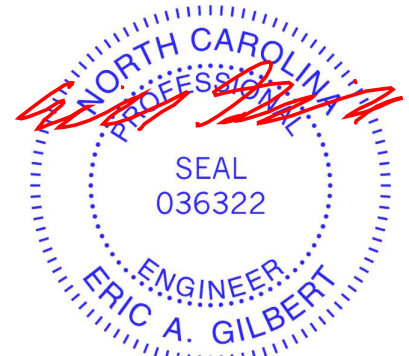
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-492/215, 2-3=-492/218, 1-6=-433/192, 3-4=-433/196
BOT CHORD 5-6=-179/259, 4-5=-152/259
WEBS 2-5=-68/311, 1-5=-94/227, 3-5=-97/227

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior (1) 9-0-0 to 11-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 4. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss has been designed for a total drag load of 100 lb. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 12-0-0 for 8.3 plf.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



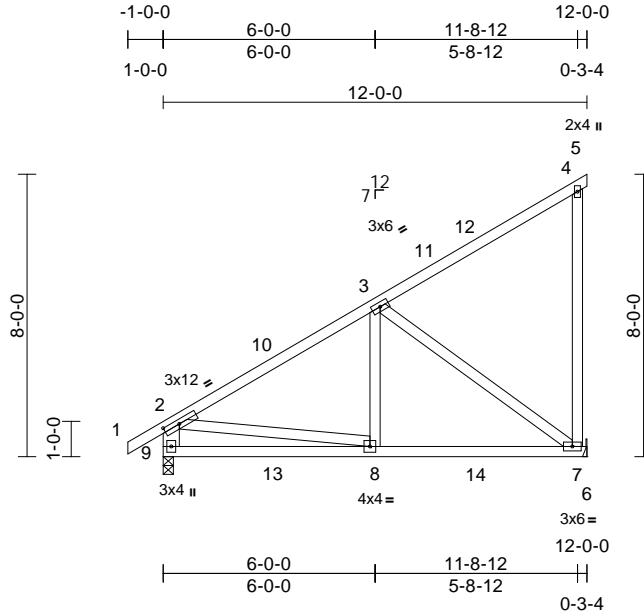
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss B2	Truss Type Monopitch	Qty 7	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)
					I70445479

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:32
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Page: 1



Scale = 1:57.2

Plate Offsets (X, Y): [2:0-5-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.16	7-8	>857	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.20	7-8	>698	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.00	8-9	>999	240		
BCDL	10.0										Weight: 77 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.3 *Except* 9-2:2x6 SP No.2

BRACING

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 7= Mechanical, 9=0-3-8
- Max Horiz 9=157 (LC 16)
- Max Uplift 7=-40 (LC 16)
- Max Grav 7=536 (LC 23), 9=538 (LC 2)

FORCES

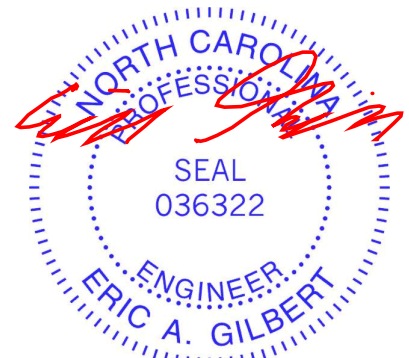
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/51, 2-3=-517/0, 3-4=-115/71, 4-5=-11/0, 2-9=-485/48
- BOT CHORD 8-9=-268/333, 7-8=-117/438, 6-7=0/0
- WEBS 3-8=0/346, 3-7=-543/145, 2-8=-37/300, 4-7=-304/77

NOTES

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.

- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Bearings are assumed to be: Joint 9 SP No.2 .
- 9) Refer to girder(s) for truss to truss connections.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 7.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



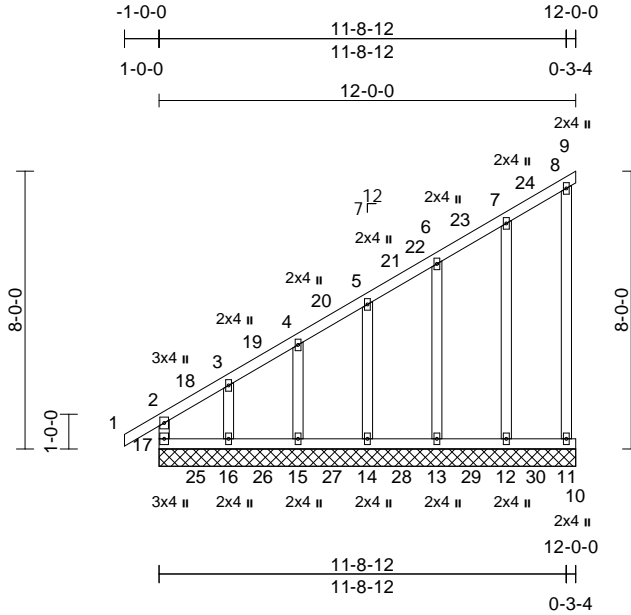
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss B2G	Truss Type Monopitch	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445480
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:33
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Page: 1



Scale = 1:57.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	-0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0										Weight: 82 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS (size)	
Max Horiz	17=158 (LC 16)
Max Uplift	9=-39 (LC 46), 10=-232 (LC 60), 11=-60 (LC 59), 12=-12 (LC 16), 13=-9 (LC 16), 14=-16 (LC 16), 16=-107 (LC 16), 17=-1 (LC 14)
Max Grav	9=132 (LC 47), 10=60 (LC 59), 11=415 (LC 60), 12=332 (LC 67), 13=334 (LC 66), 14=333 (LC 65), 15=334 (LC 64), 16=329 (LC 63), 17=314 (LC 62)

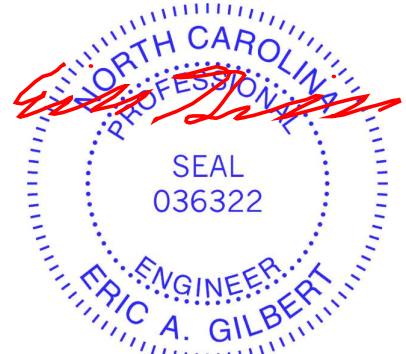
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/47, 2-3=-371/181, 3-4=-265/130, 4-5=-220/107, 5-6=-162/78, 6-7=-106/73, 7-8=-81/64, 8-9=-22/66, 2-17=-296/79
BOT CHORD	16-17=0/0, 15-16=0/0, 14-15=0/0, 13-14=0/0, 12-13=0/0, 11-12=0/0, 10-11=0/0
WEBS	7-12=-276/109, 6-13=-279/89, 5-14=-281/91, 4-15=-285/67, 3-16=-283/187, 8-11=-171/44

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 12-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 17, 232 lb uplift at joint 10, 39 lb uplift at joint 9, 12 lb uplift at joint 12, 9 lb uplift at joint 13, 16 lb uplift at joint 14, 107 lb uplift at joint 16 and 60 lb uplift at joint 11.

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



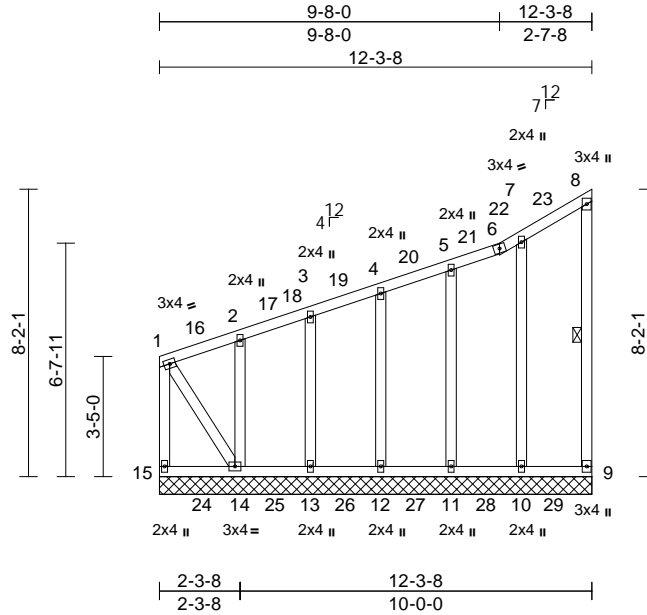
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss B1G	Truss Type Roof Special Supported Gable	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445481
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:54.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 96 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 15-1:2x4 SP No.2
OTHERS	2x4 SP No.3
BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 8-9
REACTIONS	
(size)	9=12-3-8, 10=12-3-8, 11=12-3-8, 12=12-3-8, 13=12-3-8, 14=12-3-8, 15=12-3-8
Max Horiz	15=191 (LC 15)
Max Uplift	9=-24 (LC 15), 10=-14 (LC 16), 11=-2 (LC 12), 12=-1 (LC 16), 13=-1 (LC 12), 14=-180 (LC 13), 15=-5 (LC 14)
Max Grav	9=283 (LC 66), 10=337 (LC 65), 11=332 (LC 64), 12=334 (LC 63), 13=330 (LC 62), 14=345 (LC 61), 15=289 (LC 60)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-15=-617/343, 1-2=-323/185, 2-3=-285/175, 3-4=-246/164, 4-5=-207/152, 5-6=-175/146, 6-7=-173/155, 7-8=-100/109, 8-9=-264/51
BOT CHORD	14-15=-458/331, 13-14=-110/143, 12-13=-110/143, 11-12=-110/143, 10-11=-110/143, 9-10=-110/143
WEBS	7-10=-279/140, 5-11=-276/122, 4-12=-278/101, 3-13=-279/99, 2-14=-288/116, 1-14=-395/681

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 7-11-4 to 10-11-4, Exterior(2N) 10-11-4 to 19-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15, 9, 10, 11, 12, 13, and 14. This connection is for uplift only and does not consider lateral forces.

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

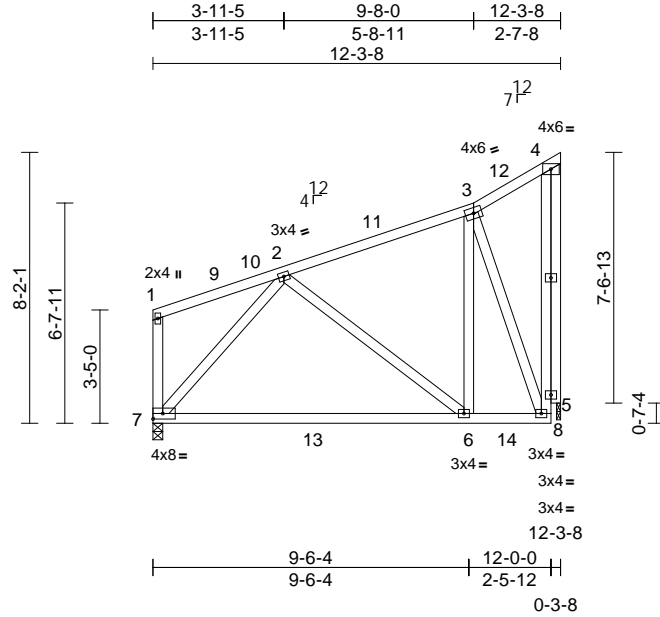
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss B1	Truss Type Roof Special	Qty 6	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445482
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.33	6-7	>433	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.48	6-7	>299	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.01	6-7	>999	240		
BCDL	10.0											
											Weight: 101 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP SS
- WEBS 2x4 SP No.3 *Except* 7-1:2x4 SP No.2
- OTHERS 2x4 SP No.3

BRACING

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 7=0-3-8, 8=0-1-8
- Max Horiz 7=114 (LC 13)
- Max Uplift 8=-28 (LC 16)
- Max Grav 7=494 (LC 48), 8=476 (LC 22)

FORCES

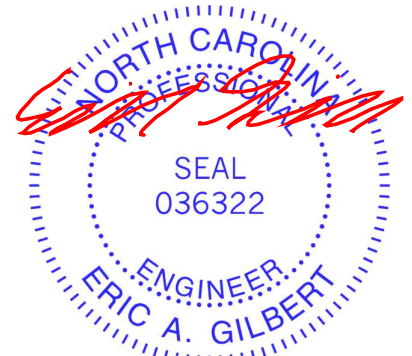
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-110/63, 2-3=-291/0, 3-4=-110/38, 4-5=-131/484, 1-7=-294/46
- BOT CHORD 6-7=-181/345, 5-6=-57/200
- WEBS 2-7=-440/56, 2-6=-174/173, 3-6=0/428, 3-5=-515/103, 4-8=-493/158

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 7-11-4 to 10-11-4, Interior (1) 10-11-4 to 19-7-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 7 SP SS , Joint 8 SP No.3 .
- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 8.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



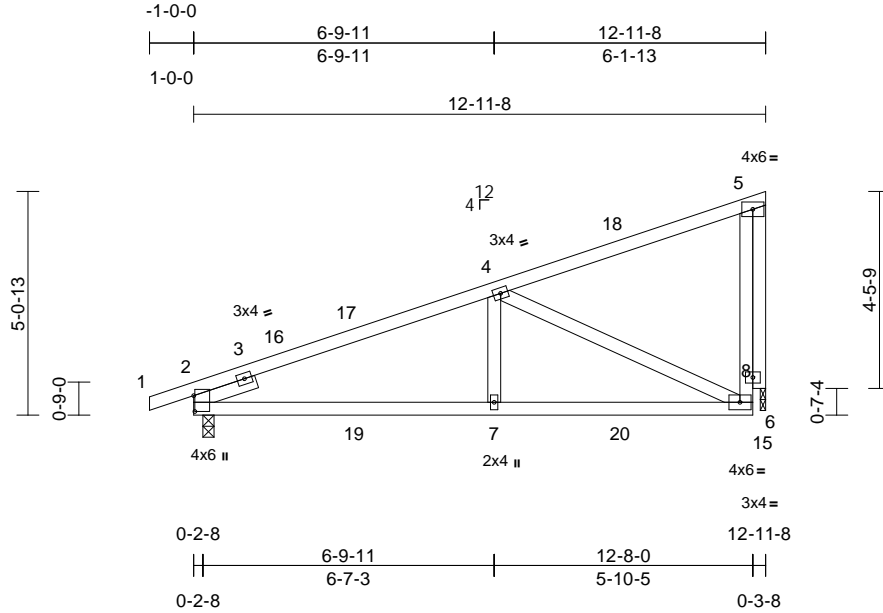
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss P2	Truss Type Monopitch	Qty 3	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445483
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Scale = 1:45.5

Plate Offsets (X, Y): [2:0-4-5,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.14	6-7	>999	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.18	6-7	>856	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	7-13	>999	240		
BCDL	10.0										Weight: 68 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.2
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.3
- OTHERS 2x4 SP No.3
- SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

- TOP CHORD Structural wood sheathing directly applied, except end verticals.
- BOT CHORD Rigid ceiling directly applied.

REACTIONS

- (size) 2=0-3-0, 15=0-1-8
- Max Horiz 2=95 (LC 12)
- Max Uplift 2=-87 (LC 12), 15=-92 (LC 2)
- Max Grav 2=593 (LC 2), 15=515 (LC 23)

FORCES

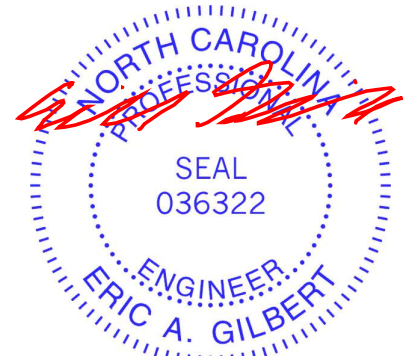
- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/26, 2-4=-738/228, 4-5=-152/10, 6-8=-157/444, 5-8=-157/444
- BOT CHORD 2-7=-313/658, 6-7=-313/658
- WEBS 4-7=-64/354, 4-6=-643/306, 5-15=-518/211

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 15 SP No.3.
- Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 15.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 15. This connection is for uplift only and does not consider lateral force.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



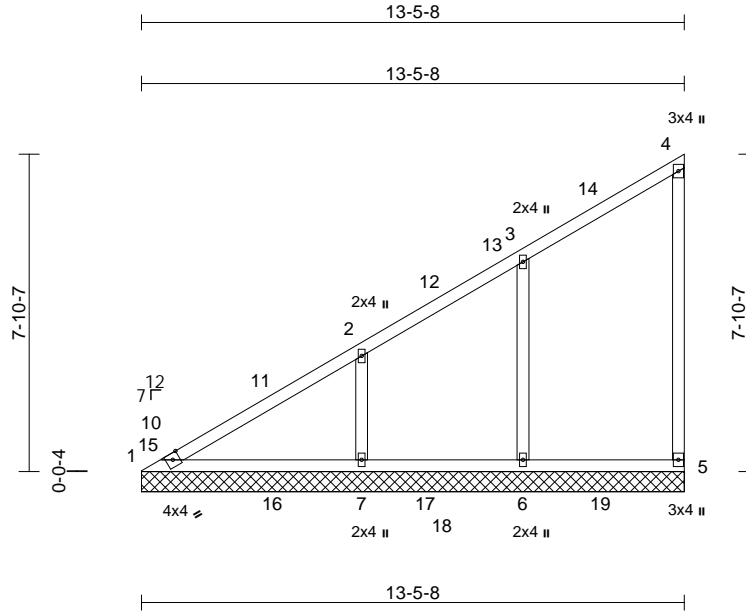
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss VA4	Truss Type Valley	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445484
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Structural, LLC, Thurmont, MD - 21788,

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Page: 1



Loading (psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof) 20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Lumber DOL	1.15	BC	0.58	Vert(TL)	n/a	-	n/a	999		
TCDL 10.0	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.01	5	n/a	n/a		
BCLL 0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL 10.0										Weight: 64 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size)
1=13-5-8, 5=13-5-8, 6=13-5-8, 7=13-5-8
Max Horiz 1=187 (LC 13)
Max Uplift 5=-15 (LC 13), 6=-22 (LC 16), 7=-21 (LC 16)
Max Grav 1=343 (LC 44), 5=321 (LC 55), 6=419 (LC 5), 7=535 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-485/257, 2-3=-214/183, 3-4=-126/115, 4-5=-286/69
BOT CHORD 1-7=-140/414, 6-7=-102/114, 5-6=-102/114
WEBS 3-6=-326/140, 2-7=-367/133

- NOTES**
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 13-4-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 5, 22 lb uplift at joint 6 and 21 lb uplift at joint 7.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

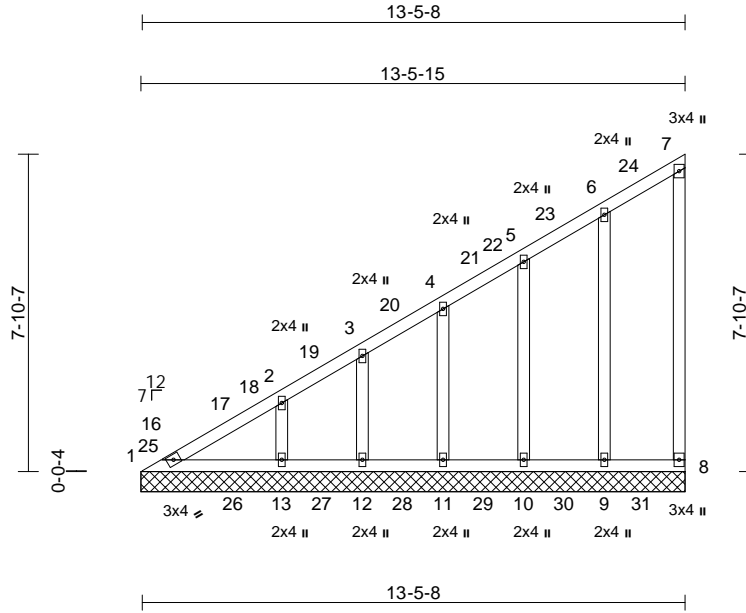
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss VG4	Truss Type Valley	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445485
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:43
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Page: 1



Scale = 1:57.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 82 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (size) 1=13-5-15, 8=13-5-15, 9=13-5-15, 10=13-5-15, 11=13-5-15, 12=13-5-15, 13=13-5-15
Max Horiz 1=187 (LC 13)
Max Uplift 8=-20 (LC 13), 9=-12 (LC 16), 10=-9 (LC 16), 11=-10 (LC 16), 12=-29 (LC 55), 13=-3 (LC 16)
Max Grav 1=311 (LC 47), 8=283 (LC 67), 9=338 (LC 66), 10=331 (LC 65), 11=339 (LC 64), 12=309 (LC 63), 13=406 (LC 55)

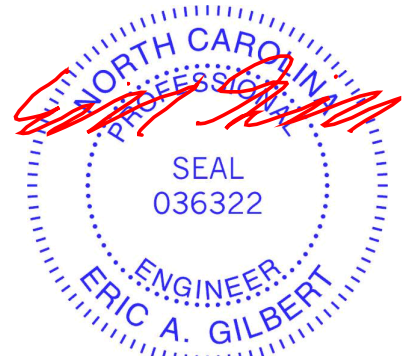
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-400/286, 2-3=-338/239, 3-4=-287/221, 4-5=-233/192, 5-6=-183/173, 6-7=-93/108, 7-8=-264/41
BOT CHORD 1-13=-151/316, 12-13=-106/139, 11-12=-106/139, 10-11=-106/139, 9-10=-106/139, 8-9=-106/139
WEBS 6-9=-279/154, 5-10=-278/100, 4-11=-284/84, 3-12=-274/78, 2-13=-318/110

NOTES

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner (3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 13-4-3 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 8, 12 lb uplift at joint 9, 9 lb uplift at joint 10, 10 lb uplift at joint 11, 29 lb uplift at joint 12 and 3 lb uplift at joint 13.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



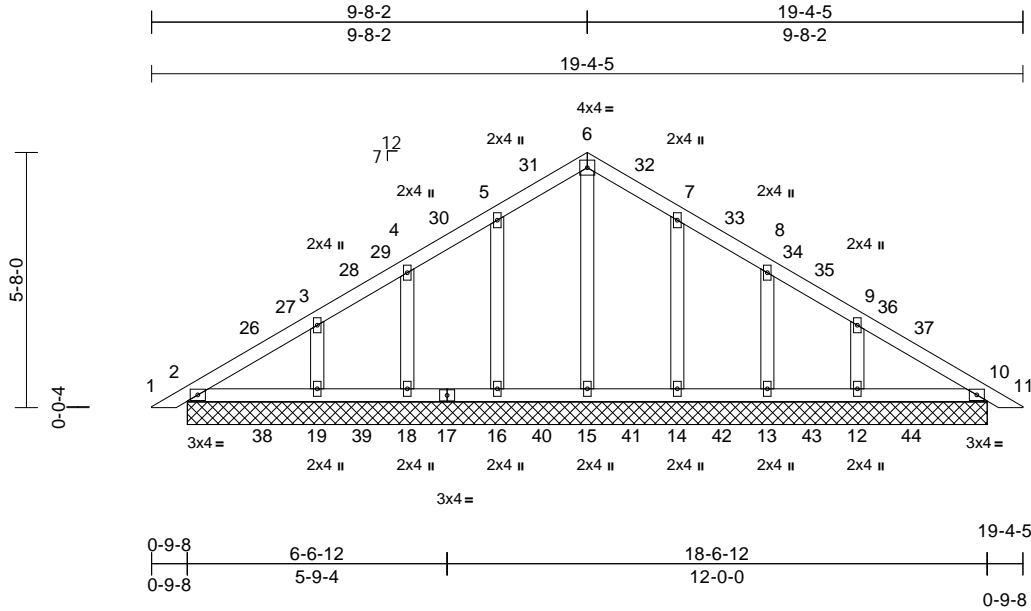
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss PB1G	Truss Type Piggyback	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445486
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:39
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Page: 1



Scale = 1:46

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 91 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=17-9-4, 10=17-9-4, 12=17-9-4,
13=17-9-4, 14=17-9-4, 15=17-9-4,
16=17-9-4, 18=17-9-4, 19=17-9-4
Max Horiz 2=-88 (LC 14)
Max Uplift 12=-15 (LC 17), 13=-9 (LC 17),
14=-10 (LC 17), 16=-10 (LC 16),
18=-9 (LC 16), 19=-16 (LC 16)
Max Grav 2=316 (LC 65), 10=316 (LC 85),
12=370 (LC 83), 13=320 (LC 82),
14=338 (LC 81), 15=321 (LC 80),
16=338 (LC 79), 18=320 (LC 78),
19=370 (LC 77)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/21, 2-3=-110/75, 3-4=-84/64,
4-5=-79/69, 5-6=-106/92, 6-7=-106/91,
7-8=-79/69, 8-9=-84/64, 9-10=-110/75,
10-11=0/21
BOT CHORD 2-19=-26/77, 18-19=-26/53, 16-18=-26/53,
15-16=-26/53, 14-15=-26/53, 13-14=-26/53,
12-13=-26/53, 10-12=-26/77
WEBS 6-15=-237/7, 5-16=-285/53, 4-18=-279/42,
3-19=-307/49, 7-14=-285/53, 8-13=-279/42,
9-12=-307/49

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 9-8-9, Exterior(2R) 9-8-9 to 12-8-9, Interior (1) 12-8-9 to 19-1-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.Opsf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3 .
- N/A

- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



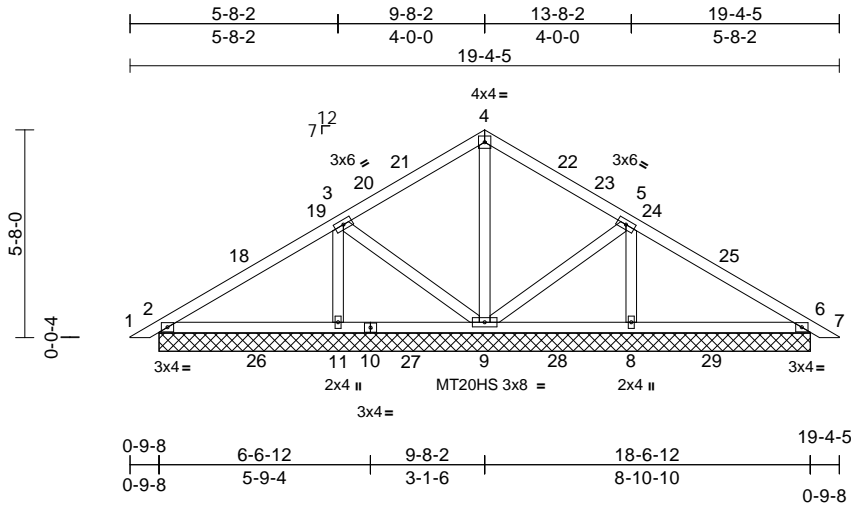
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss PB1	Truss Type Piggyback	Qty 9	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445487
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:39
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Page: 1



Scale = 1:63.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	n/a	-	n/a	999	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 89 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.3
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS

(size)	2=17-9-4, 6=17-9-4, 8=17-9-4, 9=17-9-4, 11=17-9-4
Max Horiz	2=-88 (LC 14)
Max Grav	2=360 (LC 57), 6=360 (LC 69), 8=434 (LC 67), 9=408 (LC 66), 11=434 (LC 65)

FORCES

(lb) - Maximum Compression/Maximum Tension

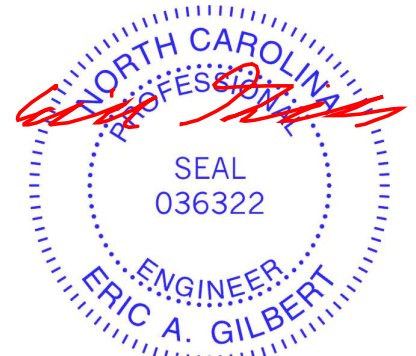
TOP CHORD	1-2=0/21, 2-3=-165/43, 3-4=-118/59, 4-5=-118/58, 5-6=-165/37, 6-7=0/21
BOT CHORD	2-11=-21/102, 9-11=-21/94, 8-9=0/74, 6-8=0/102
WEBS	4-9=-252/9, 3-11=-273/43, 5-8=-273/43, 3-9=-99/58, 5-9=-99/58

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 9-8-9, Exterior(2R) 9-8-9 to 12-8-9, Interior (1) 12-8-9 to 19-1-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- All plates are MT20 plates unless otherwise indicated.
- Plates checked for a plus or minus 5 degree rotation about its center.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.3.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



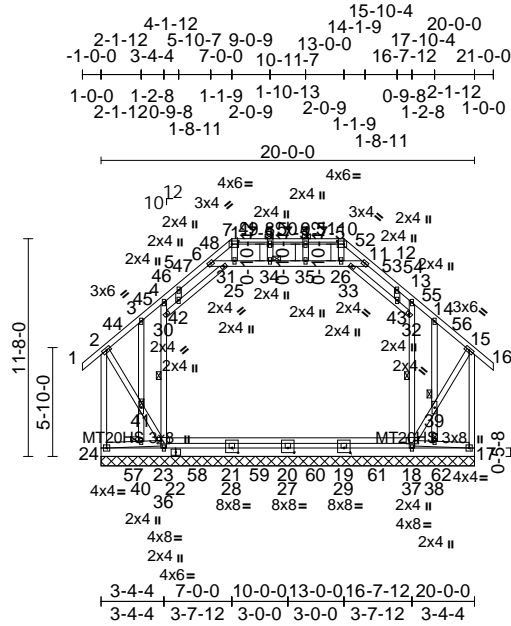
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss G1G	Truss Type Attic Supported Gable	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445488
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:36
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Page: 1



Scale = 1:84.8

Plate Offsets (X, Y): [7:0-4-4,0-2-0], [10:0-4-4,0-2-0], [19:0-4-0,0-3-0], [20:0-4-0,0-3-0], [21:0-4-0,0-3-0], [36:0-2-8,0-2-0], [37:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.00	17	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 225 lb	FT = 20%

LUMBER	WEBS	NOTES
TOP CHORD 2x4 SP No.2 BOT CHORD 2x6 SP No.2 WEBS 2x4 SP No.3 *Except* 24-2,15-17,4-23,13-18,6-11,36-37,30-31,32-3 3:2x4 SP No.2	23-36=-208/427, 30-36=-336/99, 4-30=-299/90, 18-37=-191/414, 32-37=-336/89, 13-32=-299/80, 6-31=-52/267, 25-31=-72/232, 25-34=-60/254, 34-35=-60/254, 26-35=-60/254, 26-33=-72/232, 11-33=-52/267, 7-25=-111/176, 10-26=-111/176, 28-36=-27/237, 27-28=-27/237, 27-29=-27/237, 29-37=-27/237, 20-27=0/0, 21-28=-9/1, 19-29=-9/1, 30-42=-80/8, 31-42=-60/8, 33-43=-60/9, 32-43=-80/8, 8-34=-147/24, 9-35=-147/24, 24-40=-245/134, 36-40=-237/130, 2-41=-114/643, 36-41=-115/658, 37-38=-165/34, 17-38=-170/35, 37-39=-109/658, 15-39=-109/642, 38-39=-96/26, 14-39=-135/54, 40-41=-96/39, 3-41=-135/54, 5-42=-93/20, 12-43=-93/20	5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads. 6) Provide adequate drainage to prevent water ponding. 7) All plates are MT20 plates unless otherwise indicated. 8) Plates checked for a plus or minus 5 degree rotation about its center. 9) Gable requires continuous bottom chord bearing. 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members. 12) All bearings are assumed to be SP No.2 . 13) N/A
BRACING TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-10. BOT CHORD Rigid ceiling directly applied. WEBS 1 Row at midpt 4-23, 13-18 JOINTS 1 Brace at Jt(s): 34, 38, 39, 40, 41	REACTIONS (size) 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 23=20-0-0, 24=20-0-0 Max Horiz 24=-236 (LC 14) Max Uplift 17=-106 (LC 13), 18=-344 (LC 57), 23=-357 (LC 59), 24=-125 (LC 12) Max Grav 17=1041 (LC 46), 18=286 (LC 15), 19=323 (LC 106), 20=309 (LC 105), 21=323 (LC 104), 23=304 (LC 14), 24=1041 (LC 46)	FORCES (lb) - Maximum Compression/Maximum Tension TOP CHORD 2-24=-970/135, 1-2=0/72, 2-3=-478/57, 3-4=-431/96, 4-5=-469/122, 5-6=-474/133, 6-7=-702/117, 7-8=-608/103, 8-9=-608/103, 9-10=-608/103, 10-11=-702/118, 11-12=-474/134, 12-13=-469/120, 13-14=-431/87, 14-15=-478/55, 15-16=0/72, 15-17=-970/130 BOT CHORD 23-24=-76/211, 21-23=-75/181, 20-21=-75/181, 19-20=-75/181, 18-19=-75/181, 17-18=-83/214



December 31, 2024

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0045 Roof
2412-1523-A	G1G	Attic Supported Gable	1	1	I70445488 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:36
ID:f_W_GLuMAJHWCq?b3shSfcyFggP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 2

- 14) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 15) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



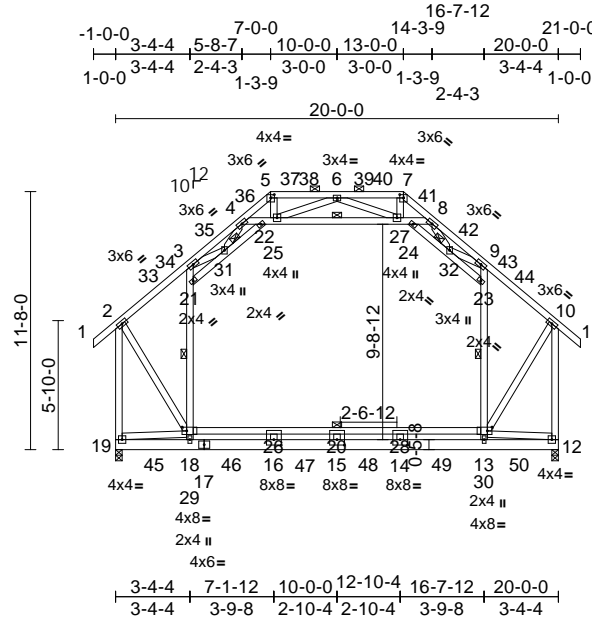
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss G1	Truss Type Attic	Qty 2	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof 170445489
Job Reference (optional)					

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:35
 ID:ebuRbFYnRn2?sGKbrsUaYyFgG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKRwCDoi7J4zJC?f

Page: 1



Scale = 1:81.9

Plate Offsets (X, Y): [5:0-2-0,0-1-13], [7:0-2-0,0-1-13], [20:0-4-0,0-3-0], [26:0-4-0,0-3-0], [28:0-4-0,0-3-0], [29:0-2-8,0-2-0], [30:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.23	15	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.38	15	>627	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	-0.10	16-18	>999	240		
BCDL	10.0										Weight: 218 lb	FT = 20%

LUMBER	WEBS	NOTES
<p>TOP CHORD 2x4 SP No.2 BOT CHORD 2x6 SP No.2 WEBS 2x4 SP No.3 *Except* 3-18,9-13,4-8,19-2,12-10,29-30,21-22,23-24: 2x4 SP No.2</p>	<p>18-29=0/458, 21-29=-344/135, 3-21=-309/93, 13-30=0/458, 23-30=-340/129, 9-23=-309/97, 4-22=-251/151, 22-25=-289/276, 25-27=-195/673, 24-27=-300/276, 8-24=-251/147, 26-29=-320/42, 20-26=-319/42, 20-28=-319/42, 28-30=-320/42, 15-20=0/97, 21-31=-166/181, 22-31=-414/453, 24-32=-424/453, 23-32=-165/179, 5-25=-146/265, 16-26=-37/29, 7-27=-150/265, 14-28=-37/29, 6-25=-414/157, 6-27=-414/157, 19-29=-522/114, 2-29=-44/641, 12-30=-522/31, 10-30=-57/650, 3-31=-135/205, 4-31=-260/158, 9-32=-141/205, 8-32=-260/165</p>	<p>7) Plates checked for a plus or minus 5 degree rotation about its center. 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members. 10) All bearings are assumed to be SP No.2 . 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads. 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord. 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. 14) Attic room checked for L/360 deflection.</p>
BRACING	REACTIONS	LOAD CASE(S)
<p>TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7. BOT CHORD Rigid ceiling directly applied. WEBS 1 Row at midpt 3-18, 9-13, 4-8, 29-30 JOINTS 1 Brace at Jt(s): 31, 32</p>	<p>(size) 12=0-3-8, 19=0-3-8 Max Horiz 19=236 (LC 14) Max Grav 12=1070 (LC 46), 19=1070 (LC 46)</p>	Standard
FORCES	NOTES	
<p>TOP CHORD 1-2=0/72, 2-3=-536/103, 3-4=-583/240, 4-5=-698/224, 5-6=-576/186, 6-7=-576/192, 7-8=-698/231, 8-9=-583/239, 9-10=-529/94, 10-11=0/72, 2-19=-1054/89, 10-12=-1054/106 BOT CHORD 18-19=0/512, 16-18=0/541, 15-16=0/541, 14-15=0/541, 13-14=0/541, 12-13=-71/512</p>	<p>1) Unbalanced roof live loads have been considered for this design. 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-0-0, Exterior(2R) 7-0-0 to 11-2-15, Interior (1) 11-2-15 to 13-0-0, Exterior(2R) 13-0-0 to 17-2-15, Interior (1) 17-2-15 to 21-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0 4) Unbalanced snow loads have been considered for this design. 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads. 6) Provide adequate drainage to prevent water ponding.</p>	

December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
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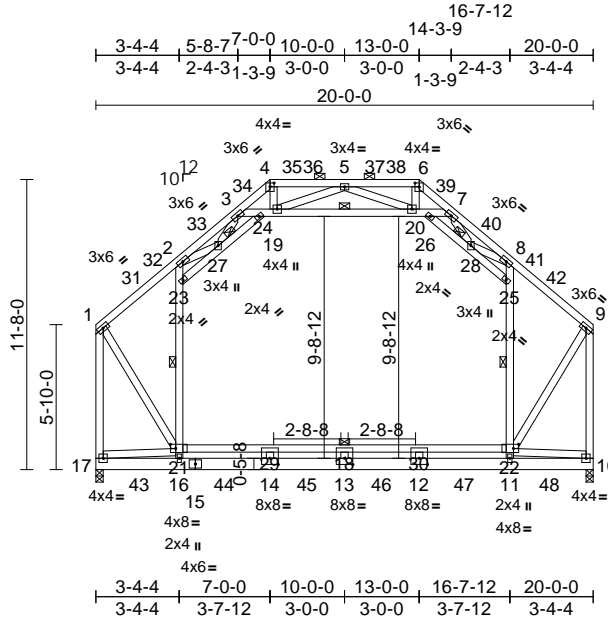
818 Soundside Road
 Edenton, NC 27932

Job 2412-1523-A	Truss G1A	Truss Type Attic	Qty 8	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445490
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:36
ID:20EGrF1SxB1dOntZHTLQBRyFgcL-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwKDCoi7J4zJC?f

Page: 1



Scale = 1:70

Plate Offsets (X, Y): [4:0-2-0,0-1-13], [6:0-2-0,0-1-13], [12:0-4-0,0-3-0], [14:0-4-0,0-3-0], [18:0-4-0,0-3-0], [21:0-2-8,0-2-0], [22:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.23	13	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.38	13	>628	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.01	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	-0.10	14-16	>999	240		
BCDL	10.0											
											Weight: 215 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
2-16,8-11,3-7,17-1,10-9,21-22,23-24,25-26:2x
4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 2-16, 8-11, 3-7, 21-22
JOINTS 1 Brace at Jt(s): 27, 28

REACTIONS (size) 10=0-3-8, 17=0-3-8
Max Horiz 17=221 (LC 14)
Max Grav 10=957 (LC 45), 17=957 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-538/83, 2-3=-584/246, 3-4=-690/231, 4-5=-570/192, 5-6=-570/198, 6-7=-690/238, 7-8=-584/246, 8-9=-531/74, 1-17=-940/63, 9-10=-940/81
BOT CHORD 16-17=0/512, 14-16=0/541, 13-14=0/541, 12-13=0/541, 11-12=0/541, 10-11=-86/512

WEBS 16-21=0/457, 21-23=-356/162, 2-23=-322/102, 11-22=0/457, 22-25=-351/156, 8-25=-322/107, 3-24=-250/146, 19-24=-293/270, 19-20=-201/664, 20-26=-304/270, 7-26=-250/141, 21-29=-318/45, 18-29=-318/45, 18-30=-318/45, 22-30=-318/45, 13-18=0/96, 4-19=-145/260, 6-20=-149/260, 5-19=-414/156, 5-20=-414/156, 17-21=-521/132, 1-21=-79/655, 10-22=-521/30, 9-22=-92/665, 23-27=-160/175, 24-27=-411/445, 26-28=-420/445, 25-28=-158/173, 2-27=-139/201, 3-27=-255/161, 8-28=-144/201, 7-28=-255/167, 14-29=-36/28, 12-30=-36/28

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-4-4, Interior (1) 3-4-4 to 7-0-0, Exterior(2R) 7-0-0 to 11-2-15, Interior (1) 11-2-15 to 13-0-0, Exterior(2R) 13-0-0 to 17-2-15, Interior (1) 17-2-15 to 19-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



December 31, 2024

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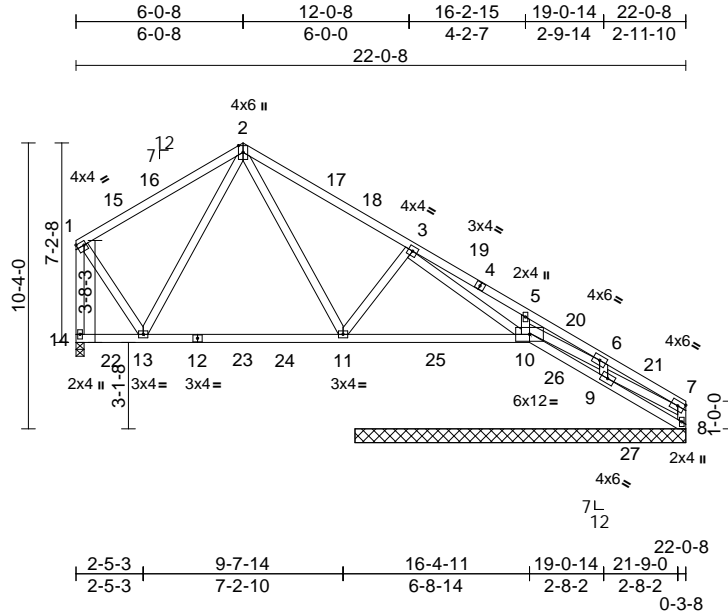
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss T1A	Truss Type Roof Special	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445491
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:41
ID:f4fECSiuMPzWY?jG66W2dmyFg7j-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:76.6

Plate Offsets (X, Y): [1:Edge,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.21	11-13	>949	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.26	11-13	>741	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.01	11-13	>999	240		
BCDL	10.0										Weight: 131 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 8=11-11-8, 9=11-11-8, 10=11-11-8, 14=0-3-8
Max Horiz 14=188 (LC 12)
Max Uplift 9=17 (LC 17)
Max Grav 8=310 (LC 64), 9=360 (LC 63), 10=847 (LC 34), 14=738 (LC 34)

FORCES

(lb) - Maximum Compression/Maximum Tension

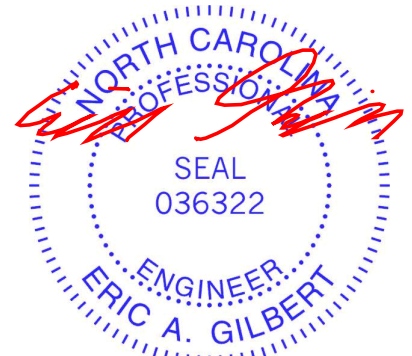
TOP CHORD 1-2=-515/93, 2-3=-914/93, 3-5=-241/58, 5-6=-162/54, 6-7=-145/22, 7-8=-290/27, 1-14=-848/18
BOT CHORD 13-14=-141/200, 11-13=0/458, 10-11=0/766, 9-10=-72/79, 8-9=-18/195
WEBS 5-10=-356/70, 6-9=-289/44, 2-13=-270/74, 3-11=-232/111, 7-9=-60/40, 6-10=0/110, 1-13=0/574, 2-11=0/514, 3-10=-809/10

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 6-5-9 to 9-5-9, Interior (1) 9-5-9 to 12-4-5, Exterior(2R) 12-4-5 to 15-4-5, Interior (1) 15-4-5 to 28-2-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Plates checked for a plus or minus 5 degree rotation about its center.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) All bearings are assumed to be SP No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 9.
- 10) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



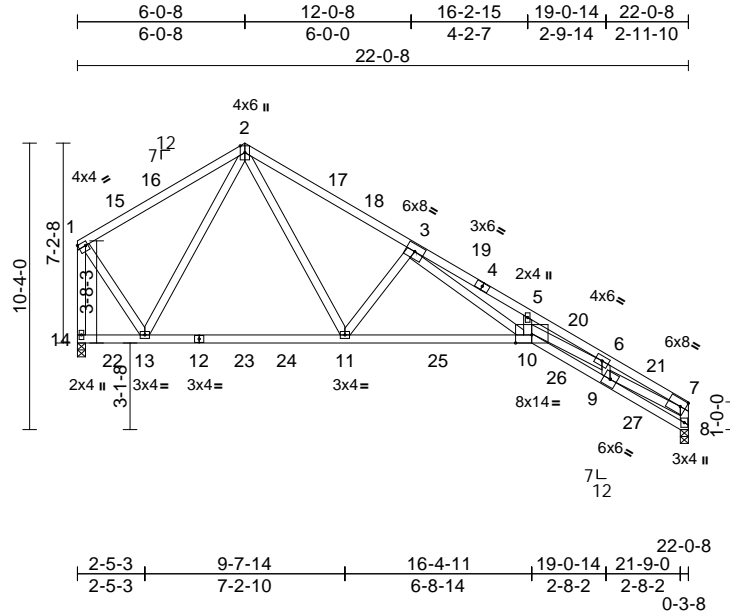
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss T1	Truss Type Roof Special	Qty 6	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445492
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:40
ID:ILOM7slw7KhITxudqyxq_9yFgG3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:76.6
Plate Offsets (X, Y): [1:Edge,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.38	10-11	>694	360	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.71	10-11	>367	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.43	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.15	10-11	>999	240		
BCDL	10.0										Weight: 131 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 12-10:2x4 SP SS
WEBS 2x4 SP No.3 *Except* 3-10,9-7,10-6:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.

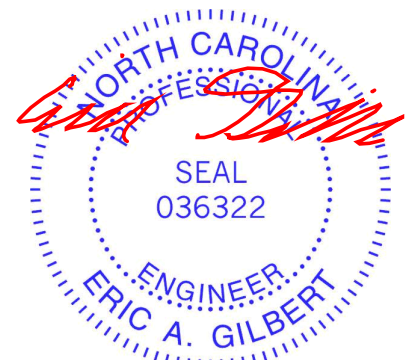
REACTIONS (size) 8=0-3-8, 14=0-3-8
Max Horiz 14=188 (LC 12)
Max Grav 8=997 (LC 34), 14=988 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-660/95, 2-3=-1584/99, 3-5=-5532/115, 5-6=-5575/46, 6-7=-3742/80, 7-8=-1106/37, 1-14=-1104/15
BOT CHORD 13-14=-138/201, 11-13=0/659, 10-11=0/1782, 9-10=-62/3457, 8-9=-23/289
WEBS 2-13=-502/66, 2-11=0/1233, 3-11=-942/107, 3-10=-40/3774, 5-10=-223/97, 6-9=-665/38, 7-9=-50/3082, 6-10=0/1816, 1-13=0/785

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 6-5-9 to 9-5-9, Interior (1) 9-5-9 to 12-4-5, Exterior(2R) 12-4-5 to 15-4-5, Interior (1) 15-4-5 to 28-2-9 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

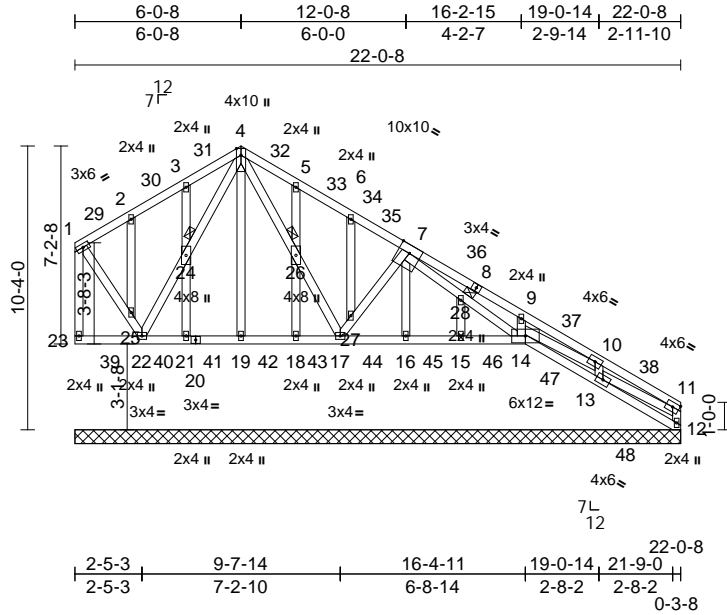
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss T1G	Truss Type Roof Special	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445493
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:41
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Page: 1



Scale = 1:76.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horiz(TL)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 173 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
JOINTS	1 Brace at Jt(s): 24, 26, 28

REACTIONS	(size)
Max Horiz	23=187 (LC 12)
Max Uplift	13=2 (LC 17), 14=8 (LC 17), 16=10 (LC 58), 17=26 (LC 17), 18=13 (LC 17), 21=16 (LC 16), 22=12 (LC 16), 23=35 (LC 12)
Max Grav	12=303 (LC 82), 13=371 (LC 81), 14=389 (LC 60), 15=299 (LC 79), 16=328 (LC 78), 17=397 (LC 58), 18=330 (LC 76), 19=315 (LC 75), 21=331 (LC 74), 22=361 (LC 54), 23=279 (LC 72)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-37/124, 2-3=-51/121, 3-4=-76/113, 4-5=-78/116, 5-6=-48/100, 6-7=-47/103, 7-9=-111/60, 9-10=-48/109, 10-11=-130/25, 11-12=-285/28, 1-23=-185/43
BOT CHORD	22-23=-158/211, 21-22=-130/176, 19-21=-130/176, 18-19=-130/177, 17-18=-130/177, 16-17=-55/102, 15-16=-53/104, 14-15=-53/104, 13-14=-87/65, 12-13=-20/192

WEBS	
9-14	=361/83, 10-13=-279/39, 22-24=-92/44, 4-24=-87/41, 1-25=-85/59, 22-25=-271/83, 4-26=-89/11, 17-26=-85/10, 17-27=-328/114, 7-27=-137/85, 11-13=-68/31, 10-14=-48/65, 7-28=-55/3, 14-28=-48/3, 4-19=-125/12, 3-24=-288/51, 21-24=-284/51, 2-25=-236/43, 5-26=-283/54, 18-26=-281/51, 6-27=-238/35, 7-16=-188/54, 15-28=-11/1

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 6-5-9 to 9-5-9, Interior (1) 9-5-9 to 12-5-12, Exterior(2R) 12-5-12 to 15-5-12, Interior (1) 15-5-12 to 28-2-9 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - Plates checked for a plus or minus 5 degree rotation about its center.
 - Gable requires continuous bottom chord bearing.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 14 and 2 lb uplift at joint 13.
- N/A
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 23, 14, 13, 22, 17, 19, 21, 18, 16, 15.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.



December 31, 2024

Continued on page 2

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ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0045 Roof
2412-1523-A	T1G	Roof Special	1	1	I70445493 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:41
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Page: 2

- 17) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

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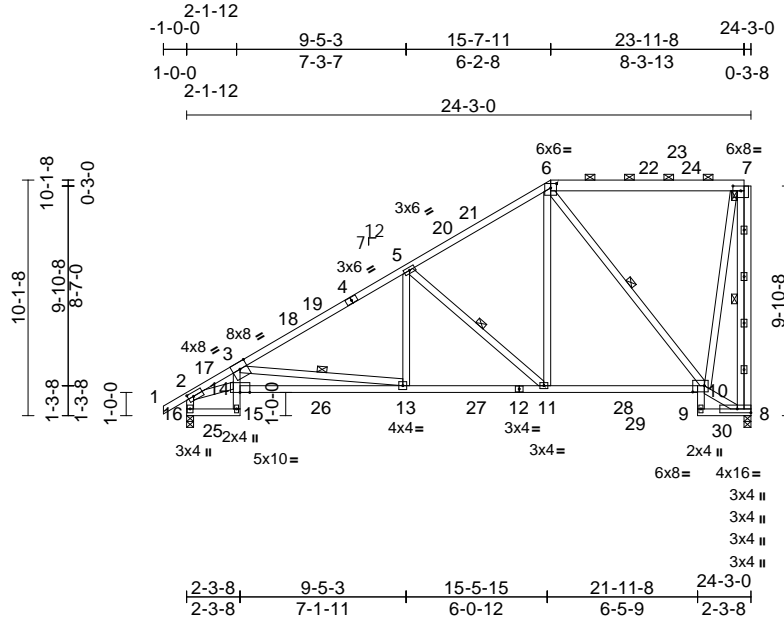
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss B2T	Truss Type Piggyback Base	Qty 2	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445494
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:33
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Page: 1



Scale = 1:75.8

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-3-0,0-2-5], [7:0-4-0,0-2-8], [10:0-6-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.21	13-14	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.34	13-14	>850	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.14	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	13-14	>999	240		
BCDL	10.0											
											Weight: 193 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 6-7:2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 14-12:2x4 SP SS, 10-9:2x4 SP No.3
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-8, 3-13, 5-11, 6-10

REACTIONS (size) 8=0-3-8, 16=0-3-8
Max Horiz 16=247 (LC 13)
Max Grav 8=1103 (LC 43), 16=1205 (LC 50)

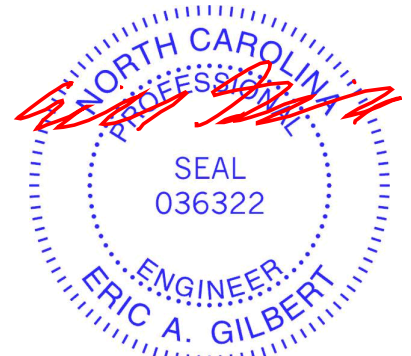
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-2872/33, 3-5=-1835/0, 5-6=-1111/74, 6-7=-309/119, 7-8=-1247/55, 2-16=-1207/0
BOT CHORD 15-16=-180/294, 14-15=-63/259, 3-14=-56/582, 13-14=-467/3234, 11-13=-201/1656, 10-11=-160/915, 9-10=-75/128, 8-9=-228/0
WEBS 3-13=-1590/267, 5-13=0/459, 5-11=-956/55, 6-11=0/885, 6-10=-1026/106, 8-10=-112/263, 7-10=-28/1038, 2-14=-219/2399

NOTES
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-1-12, Interior (1) 2-1-12 to 15-7-11, Exterior(2R) 15-7-11 to 19-10-10, Interior (1) 19-10-10 to 24-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



December 31, 2024

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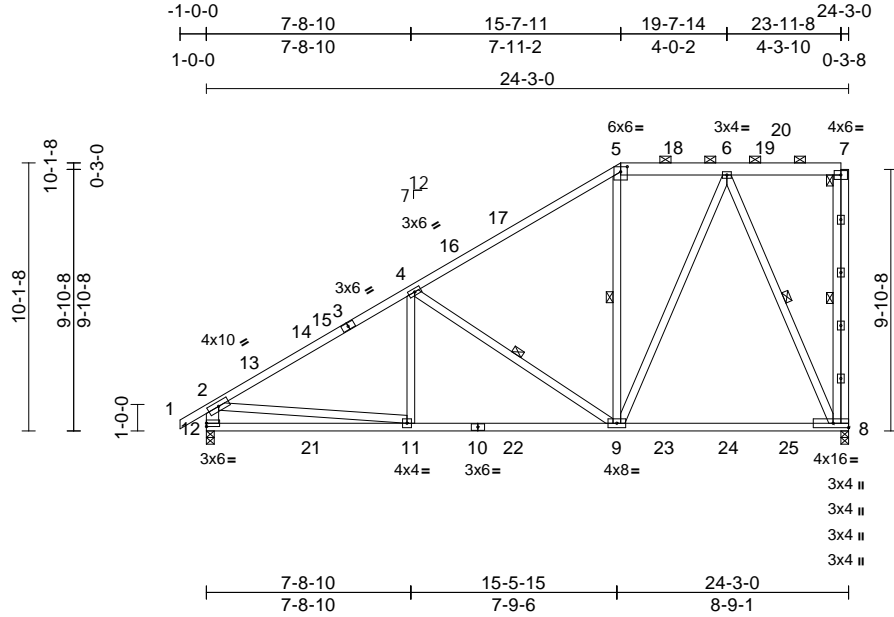
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss B2A	Truss Type Piggyback Base	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445495
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:32
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Page: 1



Scale = 1:75.8

Plate Offsets (X, Y): [5:0-3-0,0-2-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.29	8-9	>997	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.38	8-9	>743	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	8-9	>999	240		
BCDL	10.0											
											Weight: 190 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x6 SP No.2
 BOT CHORD 2x4 SP SS
 WEBS 2x4 SP No.3 *Except* 12-2:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.
 BOT CHORD Rigid ceiling directly applied.
 WEBS 1 Row at midpt 7-8, 4-9, 5-9, 6-8

REACTIONS

(size) 8=0-3-8, 12=0-3-8
 Max Horiz 12=247 (LC 13)
 Max Grav 8=1117 (LC 43), 12=1203 (LC 50)

FORCES

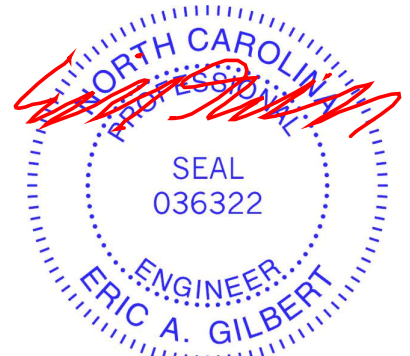
(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/51, 2-4=-1688/2, 4-5=-1069/93, 5-6=-810/98, 6-7=-153/150, 7-8=-300/50, 2-12=-1162/47
 BOT CHORD 11-12=-335/682, 9-11=-177/1503, 8-9=-121/512
 WEBS 4-11=0/341, 4-9=-789/62, 5-9=-125/146, 6-9=-53/886, 6-8=-1033/107, 2-11=0/937

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 15-7-11, Exterior(2R) 15-7-11 to 19-7-14, Interior (1) 19-7-14 to 24-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) All bearings are assumed to be SP SS.
- 11) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



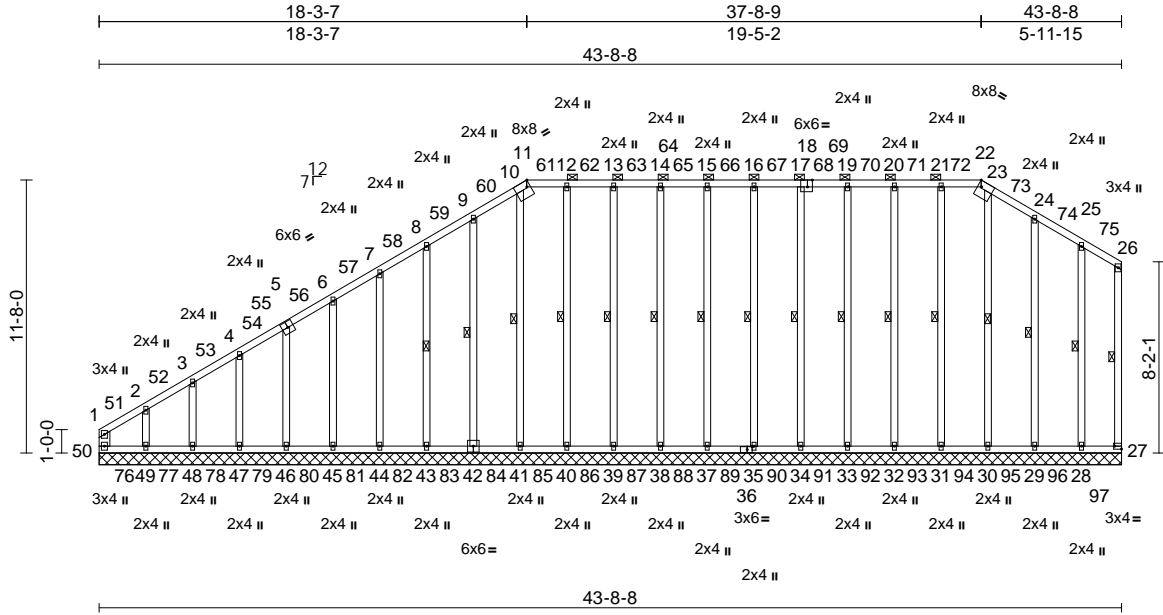
818 Soundside Road
 Edenton, NC 27932

Job 2412-1523-A	Truss A1G	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445496
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:29
ID:5nRUhQDv3zi_3pNrlB4l8tyFg_4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC7f

Page: 1



Scale = 1:89.5

Plate Offsets (X, Y): [11:0-1-12,Edge], [18:0-2-8,Edge], [22:Edge,0-3-0], [27:Edge,0-1-8], [36:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horiz(TL)	0.01	27	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS								
BCDL	10.0											
											Weight: 425 lb	FT = 20%

LUMBER		Max Grav	27=278 (LC 160), 28=329 (LC 159), 29=334 (LC 158), 30=332 (LC 157), 31=333 (LC 156), 32=333 (LC 155), 33=333 (LC 154), 34=333 (LC 153), 35=322 (LC 152), 37=333 (LC 151), 38=333 (LC 150), 39=333 (LC 149), 40=333 (LC 148), 41=332 (LC 147), 42=333 (LC 146), 43=333 (LC 145), 44=333 (LC 144), 45=333 (LC 143), 46=333 (LC 142), 47=333 (LC 141), 48=332 (LC 140), 49=333 (LC 139), 50=281 (LC 138)	WEBS	16-35=-264/35, 17-34=-264/35, 19-33=-264/35, 20-32=-264/42, 21-31=-265/31, 23-30=-262/27, 24-29=-270/72, 25-28=-267/105, 15-37=-264/35, 14-38=-264/35, 13-39=-264/42, 12-40=-265/32, 10-41=-267/38, 9-42=-269/61, 8-43=-271/56, 7-44=-273/55, 6-45=-276/55, 5-46=-278/55, 4-47=-281/59, 3-48=-284/51, 2-49=-289/153
TOP CHORD	2x4 SP No.2				
BOT CHORD	2x4 SP No.2				
WEBS	2x6 SP No.2 *Except* 26-27:2x4 SP No.3				
OTHERS	2x4 SP No.3				

BRACING		FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-22.		
BOT CHORD	Rigid ceiling directly applied.		
WEBS	1 Row at midpt 26-27, 16-35, 17-34, 19-33, 20-32, 21-31, 23-30, 24-29, 25-28, 15-37, 14-38, 13-39, 12-40, 10-41, 9-42, 8-43		

REACTIONS	(size)	27=43-8-8, 28=43-8-8, 29=43-8-8, 30=43-8-8, 31=43-8-8, 32=43-8-8, 33=43-8-8, 34=43-8-8, 35=43-8-8, 37=43-8-8, 38=43-8-8, 39=43-8-8, 40=43-8-8, 41=43-8-8, 42=43-8-8, 43=43-8-8, 44=43-8-8, 45=43-8-8, 46=43-8-8, 47=43-8-8, 48=43-8-8, 49=43-8-8, 50=43-8-8	TOP CHORD	1-50=-267/166, 1-2=-364/299, 2-3=-277/236, 3-4=-247/221, 4-6=-205/196, 6-7=-164/151, 7-8=-155/184, 8-9=-165/224, 9-10=-190/266, 10-11=-165/224, 11-12=-167/245, 12-13=-167/245, 13-14=-167/245, 14-15=-167/245, 15-16=-167/245, 16-17=-167/245, 17-19=-167/245, 19-20=-167/245, 20-21=-167/245, 21-22=-167/245, 22-23=-165/224, 23-24=-193/266, 24-25=-161/219, 25-26=-179/234, 26-27=-259/198	BOT CHORD	49-50=-112/147, 48-49=-112/147, 47-48=-112/147, 46-47=-112/147, 45-46=-112/147, 44-45=-112/147, 43-44=-112/147, 41-43=-112/147, 40-41=-112/147, 39-40=-112/147, 38-39=-112/147, 37-38=-112/147, 35-37=-112/147, 34-35=-112/147, 33-34=-112/147, 32-33=-112/147, 31-32=-112/147, 30-31=-112/147, 29-30=-112/147, 28-29=-112/147, 27-28=-112/147
Max Horiz	50=250 (LC 13)					
Max Uplift	27=-21 (LC 16), 28=-8 (LC 12), 29=-16 (LC 17), 31=-2 (LC 13), 41=-14 (LC 13), 42=-14 (LC 16), 43=-11 (LC 16), 44=-10 (LC 16), 45=-11 (LC 16), 46=-9 (LC 16), 47=-15 (LC 16), 49=-137 (LC 13), 50=-133 (LC 14)					



December 31, 2024

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0045 Roof
2412-1523-A	A1G	Piggyback Base Supported Gable	1	1	I70445496
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:29
ID:5nRUhQDv3zi_3pNrlB4l8tyFg_4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 7) Plates checked for a plus or minus 5 degree rotation about its center.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) All bearings are assumed to be SP No.2 .
- 14) N/A

- 15) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
- 16) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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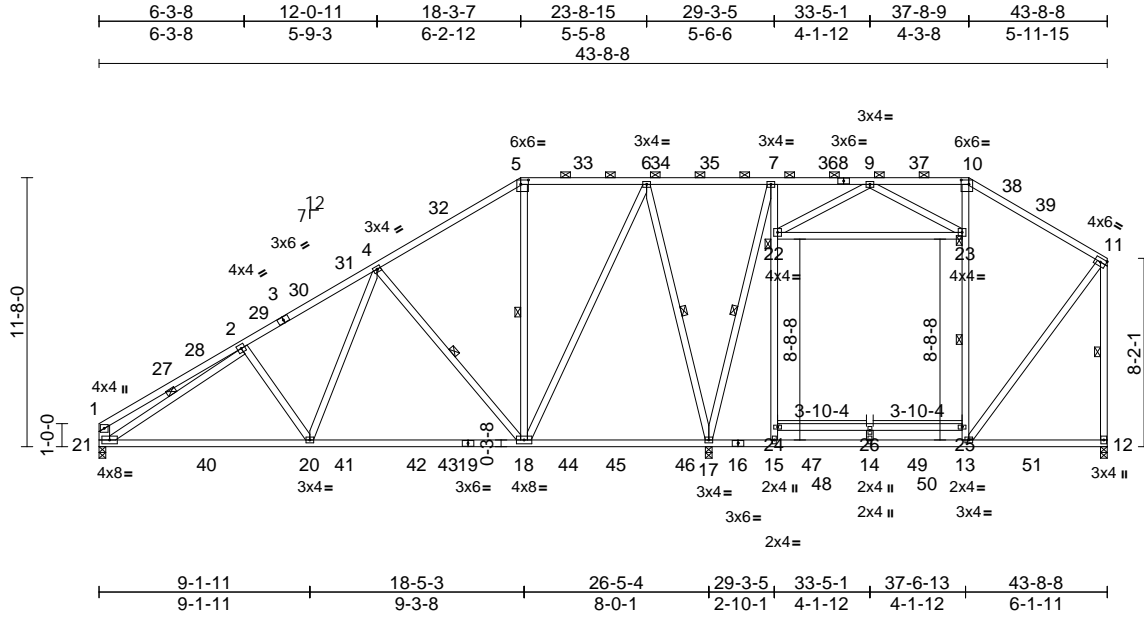
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss A1	Truss Type Attic	Qty 6	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445497
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:26
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Page: 1



Scale = 1:93

Plate Offsets (X, Y): [5:0-4-0,0-2-4], [10:0-4-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.39	18-20	>803	360
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.51	18-20	>616	240
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.04	12	n/a	n/a
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.03	12-13	>999	240
BCDL	10.0									
										Weight: 347 lb FT = 20%

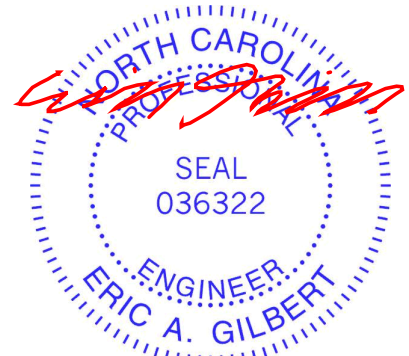
LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP SS
WEBS	2x4 SP No.3 *Except* 18-5-6-18,7-15,10-13,22-23:2x4 SP No.2, 21-1:2x6 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-9-4 max.): 5-10.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 4-18, 5-18, 6-17, 7-17, 13-23, 2-21, 11-12
JOINTS	1 Brace at Jt(s): 22, 23
REACTIONS	
(size)	12=0-3-8, 17=0-3-8, 21=0-3-8
Max Horiz	21=250 (LC 15)
Max Grav	12=1046 (LC 59), 17=2005 (LC 50), 21=1363 (LC 57)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-579/33, 2-4=-1977/21, 4-5=-1233/97, 5-6=-972/98, 6-7=-363/129, 7-9=-521/85, 9-10=-539/83, 10-11=-684/74, 1-21=-430/42, 11-12=-1035/0
BOT CHORD	20-21=-157/1814, 18-20=-145/1529, 17-18=-82/601, 15-17=-34/524, 14-15=-33/514, 13-14=-33/514, 12-13=-106/119
WEBS	2-20=-233/100, 4-20=0/553, 4-18=-839/76, 5-18=-84/239, 6-18=-37/937, 6-17=-1160/55, 7-17=-906/0, 15-24=0/488, 22-24=0/527, 7-22=0/567, 13-25=-260/147, 23-25=-239/163, 10-23=-159/133, 22-23=-45/322, 2-21=-1584/0, 11-13=0/751, 24-26=-1/14, 25-26=-1/14, 14-26=0/103, 9-22=-381/52, 9-23=-372/61

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-2-12 to 4-7-3, Interior (1) 4-7-3 to 18-3-7, Exterior(2R) 18-3-7 to 24-5-10, Interior (1) 24-5-10 to 37-8-9, Exterior(2E) 37-8-9 to 43-6-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.
- 200.0lb AC unit load placed on the bottom chord, 33-5-1 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- Plates checked for a plus or minus 5 degree rotation about its center.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS.
- This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.

- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



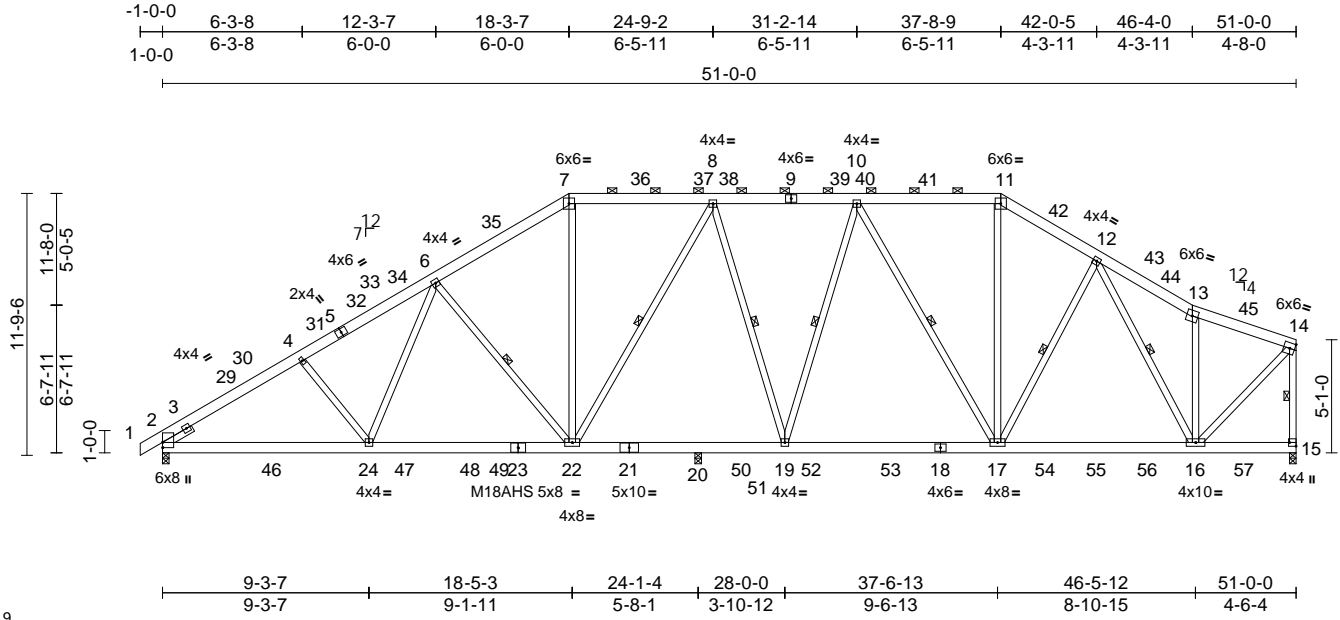
818 Soundside Road
Edenton, NC 27932

Job 2412-1523-A	Truss A1A	Truss Type Piggyback Base	Qty 1	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	I70445498
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:28
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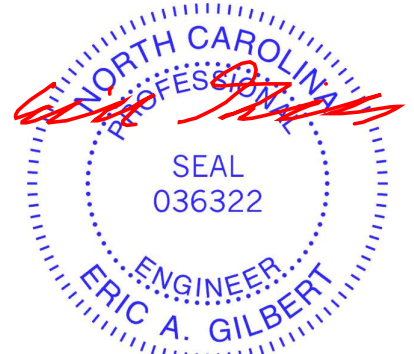
Page: 1



Scale = 1:94.9
Plate Offsets (X, Y): [15:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.23	22-24	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.40	22-24	>728	240	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.09	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS		Wind(LL)	0.09	22-24	>999	240		
BCDL	10.0											
											Weight: 441 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x6 SP No.2
 BOT CHORD 2x6 SP No.2 *Except* 21-18:2x6 SP DSS
 WEBS 2x4 SP No.3 *Except* 22-8,10-17:2x4 SP No.2
- SLIDER** Left 2x4 SP No.3 -- 1-6-0
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 3-1-11 oc purlins, except end verticals, and 2-0-0 oc purlins (4-8-10 max.): 7-11.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
- WEBS 1 Row at midpt 6-22, 12-17, 12-16, 14-15, 8-22, 8-19, 10-19, 10-17
- REACTIONS** (size) 2=0-3-8, 15=0-3-8, 20=0-3-8
 Max Horiz 2=189 (LC 15)
 Max Grav 2=2010 (LC 34), 15=2010 (LC 3), 20=682 (LC 54)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/41, 2-4=-3342/341, 4-6=-3192/361, 6-7=-2525/384, 7-8=-2166/364, 8-10=-2369/375, 10-11=-2031/352, 11-12=-2350/370, 12-13=-1825/307, 13-14=-1621/213, 14-15=-2164/208
 BOT CHORD 2-24=-431/2861, 22-24=-362/2573, 20-22=-254/2400, 19-20=-254/2400, 17-19=-246/2351, 16-17=-221/1871, 15-16=-63/73
 WEBS 4-24=-237/130, 6-24=0/529, 6-22=-872/195, 7-22=-63/919, 11-17=-80/847, 12-17=-97/347, 12-16=-833/89, 13-16=-639/156, 14-16=-184/2131, 8-22=-509/132, 8-19=-263/91, 10-19=-102/156, 10-17=-675/107
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 4-1-3, Interior (1) 4-1-3 to 18-3-7, Exterior(2R) 18-3-7 to 25-6-0, Interior (1) 25-6-0 to 37-8-9, Exterior(2R) 37-8-9 to 44-11-2, Interior (1) 44-11-2 to 50-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL); Lum DOL=1.15 Plate DOL=1.15; Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - Plates checked for a plus or minus 5 degree rotation about its center.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Bearings are assumed to be: Joint 2 SP No.2 , Joint 20 SP DSS , Joint 15 SP No.2 .
 - This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- LOAD CASE(S)** Standard



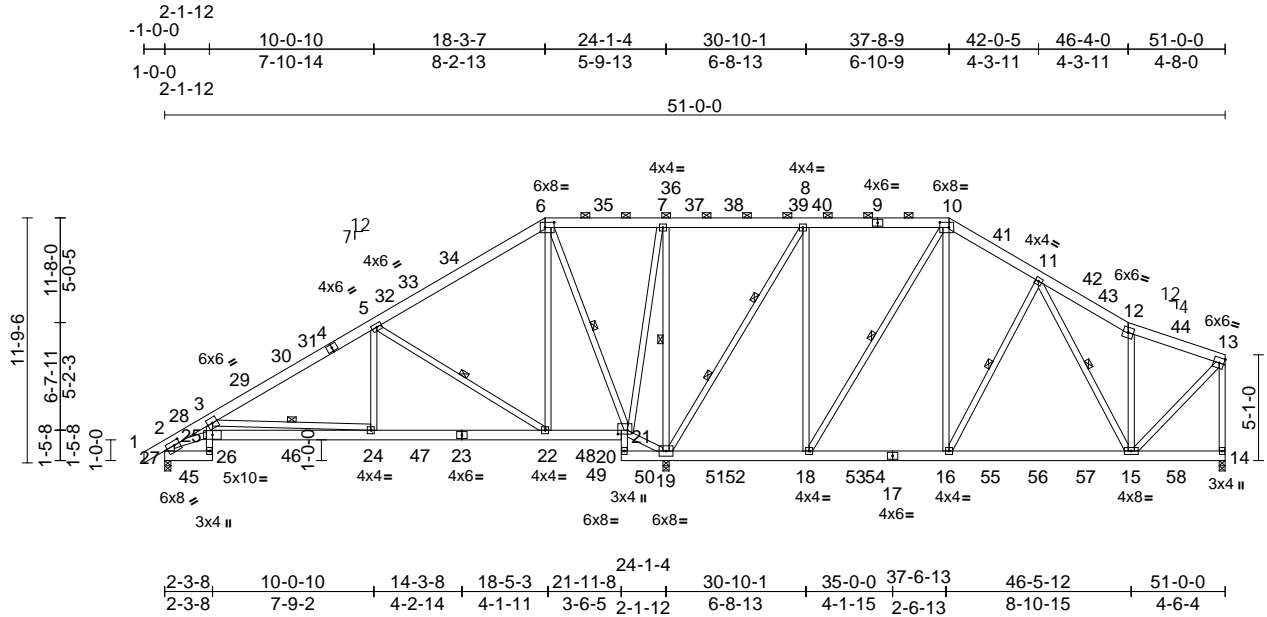
December 31, 2024

Job 2412-1523-A	Truss A1T	Truss Type Piggyback Base	Qty 2	Ply 1	The Farm at Neills Creek Lot 00.0045 Roof Job Reference (optional)	170445499
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Structural, LLC, Thurmont, MD - 21788,

Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Mon Dec 30 09:20:31
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Page: 1



Scale = 1:94.9
Plate Offsets (X, Y): [6:0-5-4,0-3-0], [10:0-5-4,0-3-0], [21:0-5-8,0-2-4], [27:0-3-4,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.11	15-16	>999	360	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.18	24-25	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.09	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS		Wind(LL)	0.04	24-25	>999	240		
BCDL	10.0										Weight: 477 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x6 SP No.2
 - BOT CHORD 2x6 SP No.2 *Except* 26-3,21-20:2x4 SP No.3
 - WEBS 2x4 SP No.3 *Except* 27-2:2x6 SP No.2, 19-8,18-10:2x4 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 5-6-2 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-10.
 - BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 - WEBS 1 Row at midpt 3-24, 5-22, 6-21, 7-19, 11-16, 11-15, 10-18
 - WEBS 2 Rows at 1/3 pts 8-19
- REACTIONS** (size)
- 14=0-3-8, 19=0-3-8, 27=0-3-8
 - Max Horiz 27=193 (LC 13)
 - Max Grav 14=1001 (LC 71), 19=2962 (LC 3), 27=812 (LC 61)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/51, 2-3=-1780/164, 3-5=-1028/95, 5-6=-104/339, 6-7=-48/662, 7-8=-71/842, 8-10=-292/214, 10-11=-706/221, 11-12=-856/215, 12-13=-732/130, 2-27=-839/113, 13-14=-988/98, 26-27=-99/228, 25-26=-28/270, 3-25=-37/477, 24-25=-396/1839, 22-24=-110/870, 21-22=-237/225, 20-21=-165/61, 19-20=-53/12, 18-19=-164/269, 16-18=0/546, 15-16=-43/617, 14-15=-65/73
 - WEBS 3-24=-1044/288, 5-24=0/485, 5-22=-1192/220, 6-22=-31/892, 6-21=-1484/220, 19-21=-909/263, 7-21=-111/921, 7-19=-1232/204, 10-16=-58/753, 11-16=-417/176, 11-15=-70/200, 12-15=-432/135, 13-15=-22/900, 2-25=-282/1378, 8-18=-9/1019, 8-19=-1638/205, 10-18=-911/109
- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -1-0-0 to 4-1-3, Interior (1) 4-1-3 to 18-3-7, Exterior(2R) 18-3-7 to 25-6-0, Interior (1) 25-6-0 to 37-8-9, Exterior(2R) 37-8-9 to 44-11-2, Interior (1) 44-11-2 to 50-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
 - Provide adequate drainage to prevent water ponding.
 - Plates checked for a plus or minus 5 degree rotation about its center.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- LOAD CASE(S)** Standard
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - All bearings are assumed to be SP No.2.
 - This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



December 31, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

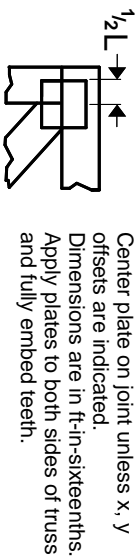
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



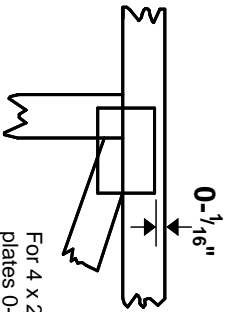
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16\" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

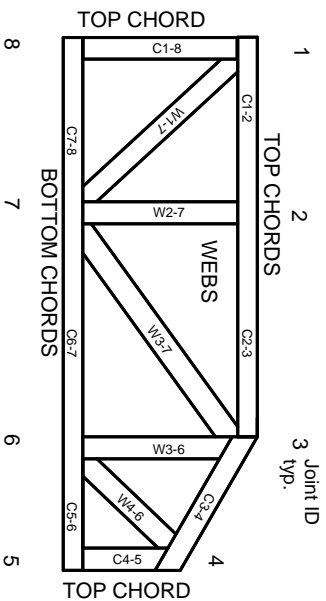


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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ENGINEERING BY
TRENGO
A MITek Affiliate

MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.