ENGINEERING BY TRENCO
A MiTek Affiliate

Lumber design values are in accordance with ANSI/TPI 1-2007 section 6.3
These truss designs rely on lumber values established by others.

RE: 3822905 - Furr, Meadows, 1 Shady Grove

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Project Customer: Furr Construction Project Name:
Lot/Block: 1 Subdivision: SHADY GROVE
Address:
City: LILLINGTON State: NC

Name Address and License # of Structural Engineer of Record, If there is one, for the building.

Name: License #:
Address:
City, County: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-10 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-10
Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 47 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date	No.	Seal#	Job ID#	Truss Name	Date
1	I63012606	3822905	A01	1/12/24			3822905	E04	1/12/24
2	I63012607	3822905	A02	1/12/24	25	I63012630	3822905	E05	1/12/24
3	I63012608	3822905	A03	1/12/24	26	I63012631	3822905	E06	1/12/24
4	I63012609	3822905	A04	1/12/24	27	I63012632	3822905	E07	1/12/24
5	I63012610	3822905		1/12/24	28	I63012633	3822905	E08	1/12/24
6	I63012611	3822905	A06	1/12/24	29	I63012634	3822905	E09	1/12/24
7	I63012612	3822905	A07	1/12/24	30	I63012635	3822905		1/12/24
8	I63012613	3822905	B01	1/12/24	31	I63012636	3822905	E11	1/12/24
9	I63012614	3822905	B02	1/12/24	32	I63012637	3822905	G01	1/12/24
10	I63012615	3822905	B03	1/12/24			3822905	G02	1/12/24
11	I63012616	3822905		1/12/24	34	I63012639	3822905	G03	1/12/24
12	I63012617	3822905	B05	1/12/24	35	I63012640	3822905	H01	1/12/24
13	I63012618	3822905	C01	1/12/24	36	I63012641	3822905	H02	1/12/24
14	I63012619	3822905	C02	1/12/24	37	I63012642	3822905	JA1	1/12/24
	I63012620	3822905		1/12/24	38	I63012643	3822905	JA2	1/12/24
16	I63012621	3822905	C04	1/12/24	39	I63012644	3822905	JA3	1/12/24
17	I63012622	3822905	C05	1/12/24	40	I63012645	3822905	JA4	1/12/24
18	I63012623	3822905	CJ1	1/12/24	41	I63012646	3822905	JB1	1/12/24
19	I63012624	3822905	CJ2	1/12/24			3822905	V01	1/12/24
20	I63012625	3822905	D01	1/12/24	43	I63012648	3822905	V02	1/12/24
21	I63012626	3822905		1/12/24	44	I63012649	3822905	V03	1/12/24
22	I63012627	3822905	E02	1/12/24	45	I63012650	3822905	V04	1/12/24
23	I63012628	3822905	E03	1/12/24	46	I63012651	3822905	V05	1/12/24

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource-Sumter,SC.

Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina is December 31, 2024.

January 12,2024
Gilbert, Eric

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.

ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: 3822905 - Furr, Meadows, 1 Shady Grove

Site Information:

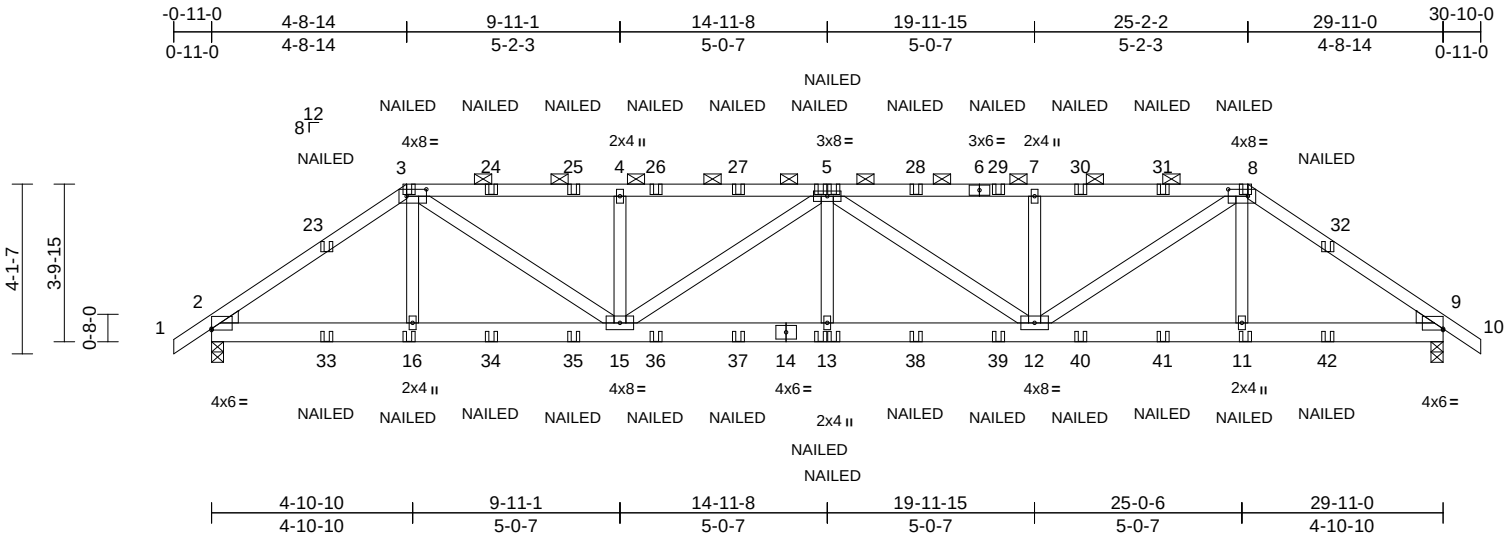
Project Customer: Furr Construction Project Name:
Lot/Block: 1 Subdivision: SHADY GROVE
Address:
City, County: LILLINGTON State: NC

No.	Seal#	Job ID#	Truss Name	Date
47	I63012652	3822905	V06	1/12/24

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	A01	Hip Girder	1	2	Job Reference (optional)	I63012606

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:45 Page: 1
ID:eDfXayTPWgHnMYUGZiDUXnzagrF-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:56

Plate Offsets (X, Y): [2:Edge,0-0-6], [3:0-5-12,0-2-0], [8:0-5-12,0-2-0], [9:Edge,0-0-6]

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)	-0.08	13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.17	13	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.19	Horz(CT)	-0.04	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.18	13	>999	240	Weight: 358 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 9-8-3 oc bracing.

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=-127 (LC 6)
Max Uplift 2=-1100 (LC 8), 9=-1100 (LC 9)
Max Grav 2=1703 (LC 15), 9=1703 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-3=-2481/1706, 3-4=-3365/2439, 4-5=-3365/2439, 5-7=-3365/2439, 7-8=-3365/2439, 8-9=-2482/1707, 9-10=0/31
BOT CHORD 2-16=-1451/2091, 15-16=-1451/2097, 13-15=-2779/3937, 12-13=-2779/3937, 11-12=-1359/2042, 9-11=-1360/2036
WEBS 3-16=-43/217, 8-11=-44/217, 4-15=-425/441, 3-15=-1257/1694, 5-15=-588/453, 5-13=-42/278, 5-12=-587/451, 7-12=-425/441, 8-12=-1258/1695

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1100 lb uplift at joint 2 and 1100 lb uplift at joint 9.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-8=-60, 8-10=-60, 17-20=-20
Concentrated Loads (lb)
Vert: 3=-29 (B), 8=-29 (B), 16=-24 (B), 11=-24 (B), 13=-49 (B), 5=-59 (B), 24=-29 (B), 25=-29 (B), 26=-29 (B), 27=-29 (B), 28=-29 (B), 29=-29 (B), 30=-29 (B), 31=-29 (B), 33=-77 (B), 34=-24 (B), 35=-24 (B), 36=-24 (B), 37=-24 (B), 38=-24 (B), 39=-24 (B), 40=-24 (B), 41=-24 (B), 42=-77 (B)

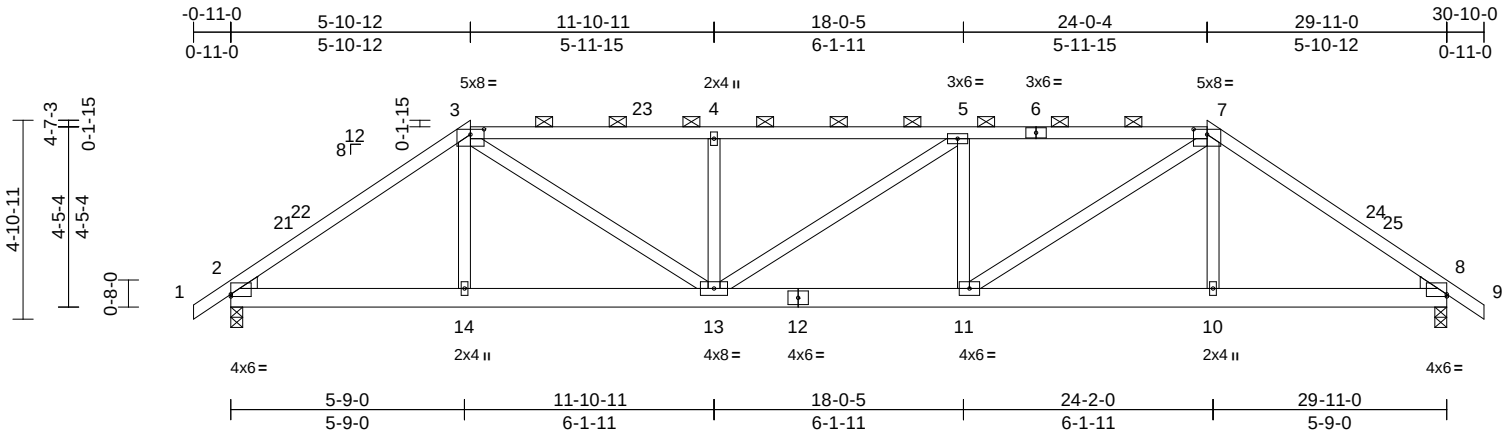
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012607
3822905	A02	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:47 Page: 1
ID:LbCSXkBMAIFBUsff9fosZkzagrd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:56.7

Plate Offsets (X, Y): [2:Edge,0-0-10], [3:0-4-0,0-1-9], [7:0-4-0,0-1-9], [8:Edge,0-0-10]

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)	-0.10	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.21	11-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.12	11-13	>999	240	Weight: 176 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-11 oc purlins, except 2-0-0 oc purlins (3-3-12 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 9-5-5 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=149 (LC 11)
Max Uplift 2=-269 (LC 9), 8=-269 (LC 8)
Max Grav 2=1252 (LC 1), 8=1252 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-3=-1774/513, 3-4=-2158/697, 4-5=-2156/695, 5-7=-2165/700, 7-8=-1773/512, 8-9=0/31
BOT CHORD 2-14=-417/1398, 13-14=-419/1395, 11-13=-613/2165, 10-11=-292/1395, 8-10=-290/1398
WEBS 3-14=0/214, 7-10=0/212, 4-13=-403/271, 3-13=-407/983, 5-13=-46/48, 5-11=-427/296, 7-11=-411/993

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-10-12, Exterior (2) 5-10-12 to 10-1-11, Interior (1) 10-1-11 to 24-0-4, Exterior (2) 24-0-4 to 28-3-3, Interior (1) 28-3-3 to 30-10-0 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 269 lb uplift at joint 2 and 269 lb uplift at joint 8.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) 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

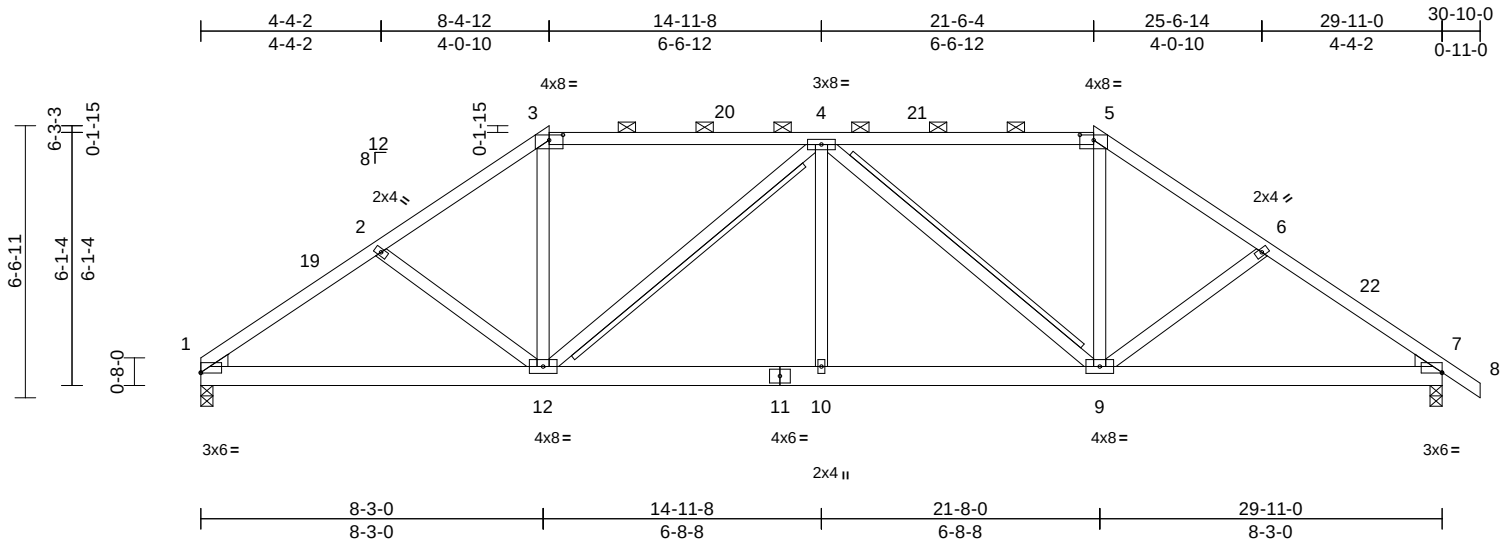
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	A03	Hip	1	1	Job Reference (optional)	I63012608

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:48 Page: 1
ID:l0gBdGawURV30Q_5sEvfghzagti-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:55.5

Plate Offsets (X, Y): [1:Edge,0-0-2], [3:0-4-0,0-1-9], [5:0-4-0,0-1-9], [7:Edge,0-0-2]

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	0.62	Vert(LL)	-0.07	9-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.14	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.07	10-12	>999	240	Weight: 186 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SPF No.2(flat)
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-4 oc purlins, except 2-0-0 oc purlins (4-6-5 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS T-Brace: 2x4 SPF No.2 - 4-12, 4-9 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS (size) 1=0-3-8, 7=0-3-8
Max Horiz 1=-198 (LC 10)
Max Uplift 1=-234 (LC 12), 7=-264 (LC 13)
Max Grav 1=1196 (LC 1), 7=1253 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1774/540, 2-3=-1584/513, 3-4=-1264/471, 4-5=-1261/473, 5-6=-1580/503, 6-7=-1770/537, 7-8=0/31
BOT CHORD 1-12=-386/1412, 10-12=-386/1619, 9-10=-386/1619, 7-9=-353/1407
WEBS 2-12=-270/237, 3-12=-102/539, 4-12=-541/280, 4-10=0/249, 4-9=-543/279, 5-9=-103/538, 6-9=-270/236

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 8-4-12, Exterior (2) 8-4-12 to 12-7-11, Interior (1) 12-7-11 to 21-6-4, Exterior (2) 21-6-4 to 25-8-6, Interior (1) 25-8-6 to 30-10-0 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 234 lb uplift at joint 1 and 264 lb uplift at joint 7.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

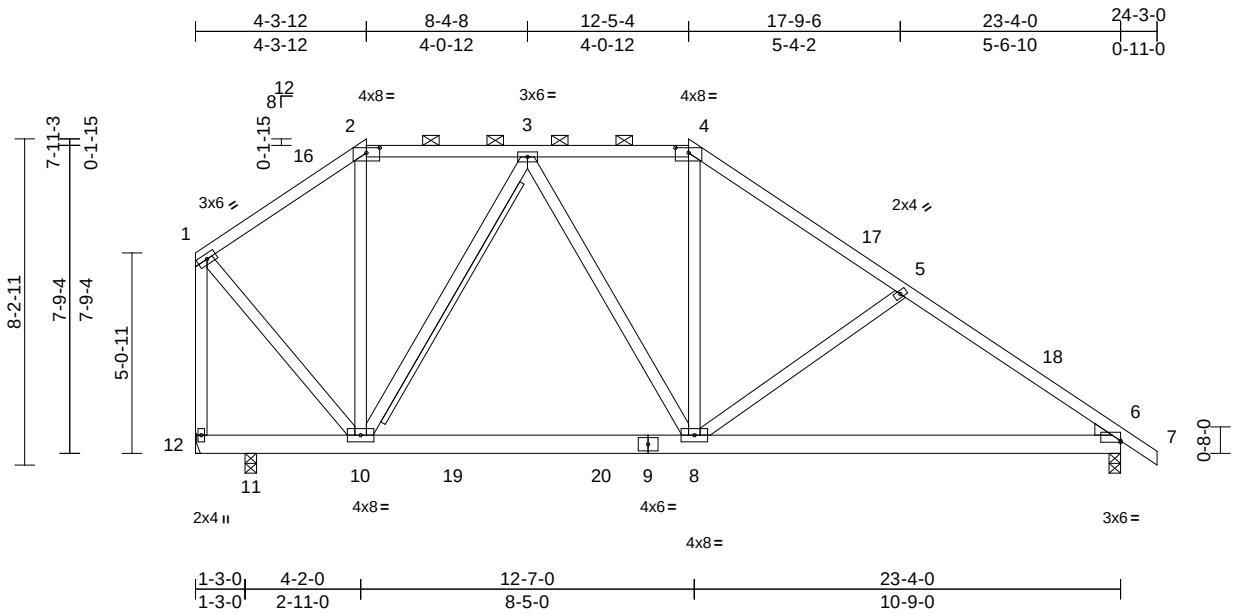
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove I63012609
3822905	A04	Hip	1	1	Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:48
ID:NzlaIIh8h?IQmCv34O5YCHzagur-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.1

Plate Offsets (X, Y): [2:0-4-0,0-1-9], [4:0-4-0,0-1-9], [6:Edge,0-0-6]

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	0.36	Vert(LL)	-0.08	8-15	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.17	8-15	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.03	8-15	>999	240	Weight: 166 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 12-1:2x4 SP No.2
OTHERS	2x4 SPF No.2(flat)
WEDGE	Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-0-8 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	T-Brace: 2x4 SPF No.2 - 3-10 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS (size) 6=0-3-8, 11=0-3-8, 12= Mechanical
Max Horiz 12=-322 (LC 13)
Max Uplift 6=-241 (LC 13), 11=-20 (LC 8), 12=-145 (LC 13)
Max Grav 6=975 (LC 1), 11=154 (LC 1), 12=812 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-553/216, 2-3=-445/233, 3-4=-774/334, 4-5=-987/322, 5-6=-1266/376, 6-7=0/31, 1-12=-858/300
BOT CHORD	11-12=-193/318, 10-11=-193/318, 8-10=-126/664, 6-8=-203/987
WEBS	5-8=-413/323, 1-10=-154/639, 4-8=-13/309, 3-8=-95/292, 2-10=-12/124, 3-10=-516/216

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 6-8-12 to 9-8-12, Interior (1) 9-8-12 to 10-10-12, Exterior (2) 10-10-12 to 14-11-8, Interior (1) 14-11-8 to 19-0-4, Exterior (2) 19-0-4 to 23-3-3, Interior (1) 23-3-3 to 30-10-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: , Joint 11 SP No.2 crushing capacity of 565 psi, Joint 6 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 12, 241 lb uplift at joint 6 and 20 lb uplift at joint 11.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

January 12,2024

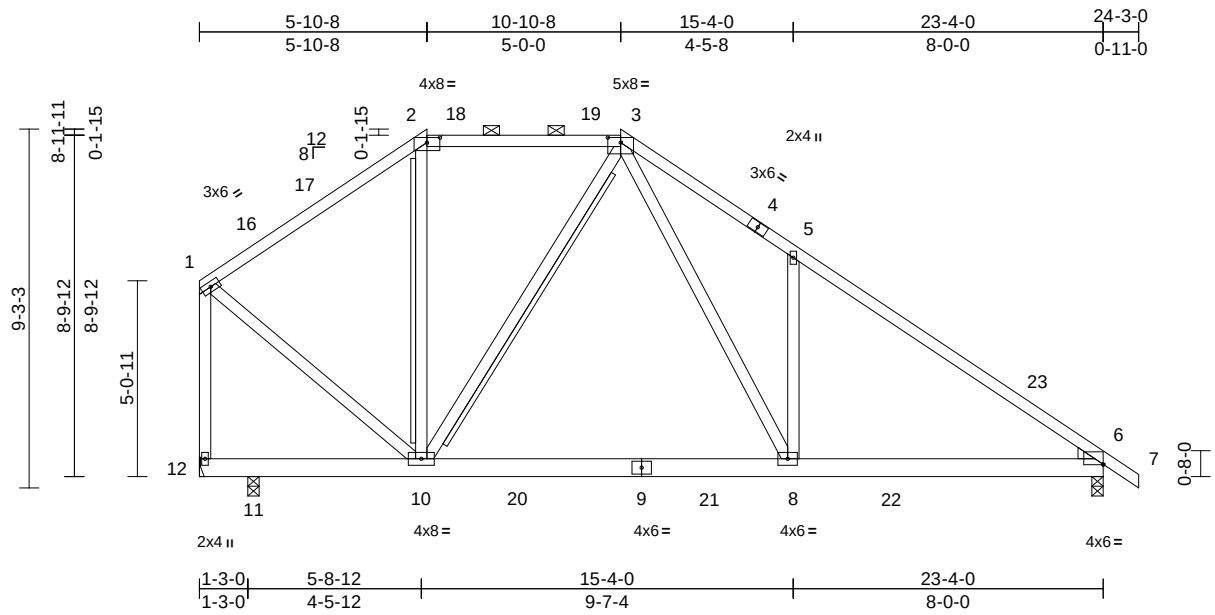
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	A05	Hip	1	1	I63012610
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:49
ID:ZOZTsRFtflcGn2Vaju10zOzah?t-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:59.5

Plate Offsets (X, Y): [2:0-4-0,0-1-9], [3:0-4-0,0-1-9], [6:Edge,0-0-2]

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	0.68	Vert(LL)	-0.09	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.07	8-15	>999	240	Weight: 162 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 12-1:2x4 SP No.2
OTHERS	2x4 SPF No.2(flat)
WEDGE	Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-3 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-3.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS T-Brace: 2x4 SPF No.2 - 2-10, 3-10
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
Brace must cover 90% of web length.

REACTIONS (size) 6=0-3-8, 11=0-3-8, 12= Mechanical
Max Horiz 12=-345 (LC 13)
Max Uplift 6=-252 (LC 13), 11=-37 (LC 18), 12=-188 (LC 13)
Max Grav 6=1025 (LC 20), 11=89 (LC 3), 12=907 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-687/256, 2-3=-565/282, 1-12=-895/309, 3-5=-1342/540, 5-6=-1310/319, 6-7=0/31

BOT CHORD 11-12=-216/336, 10-11=-216/336, 8-10=-33/663, 6-8=-249/995

WEBS 1-10=-125/654, 3-8=-414/945, 5-8=-522/429, 2-10=-85/157, 3-10=-343/199

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 6-8-12 to 9-8-12, Interior (1) 9-8-12 to 12-5-8, Exterior (2) 12-5-8 to 16-8-7, Interior (1) 16-8-7 to 17-5-8, Exterior (2) 17-5-8 to 21-11-0, Interior (1) 21-11-0 to 30-10-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: , Joint 11 SP No.2 crushing capacity of 565 psi, Joint 6 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 12, 252 lb uplift at joint 6 and 37 lb uplift at joint 11.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

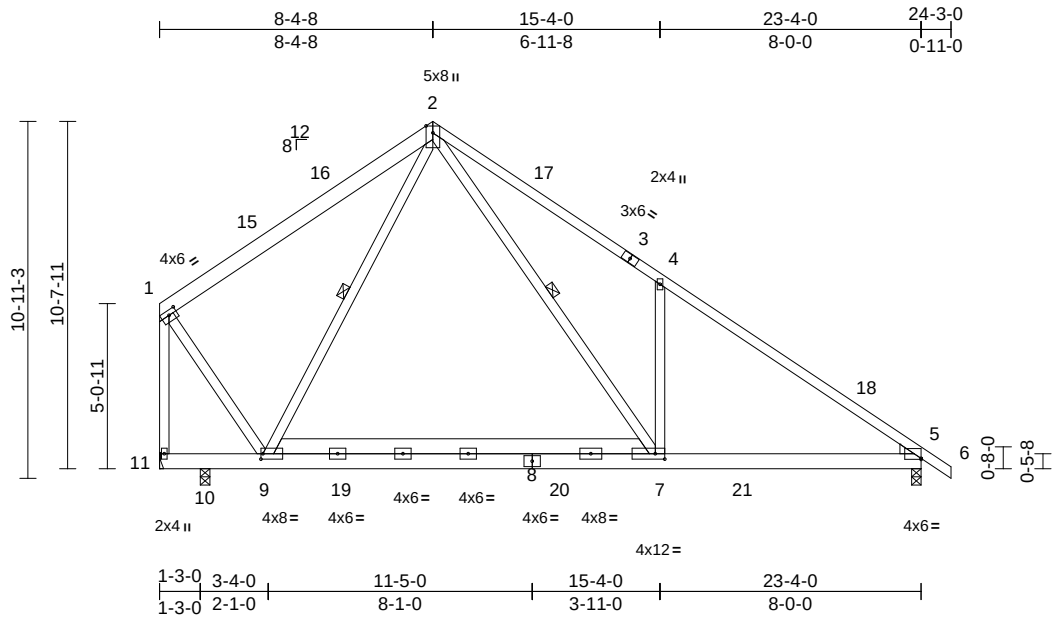
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012611
3822905	A06	Common	3	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:49 Page: 1

ID:eQ67tsxZDzAbTd3kXpj8AkzahAb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70.6

Plate Offsets (X, Y): [1:Edge,0-1-12], [5:Edge,0-0-6], [7:0-3-8,0-2-0], [9:0-0-12,0-2-0]

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	0.66	Vert(LL)	-0.08	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.15	7-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.07	7-14	>999	240	Weight: 191 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-2:2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 11-1:2x4 SP No.2
WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-7, 2-9

REACTIONS (size) 5=0-3-8, 10=0-3-8, 11= Mechanical
Max Horiz 11=-382 (LC 13)
Max Uplift 5=-254 (LC 13), 10=-92 (LC 13), 11=-150 (LC 13)
Max Grav 5=1070 (LC 20), 10=117 (LC 1), 11=978 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-593/183, 2-4=-1480/612, 4-5=-1391/286, 5-6=0/31, 1-11=-1057/195
BOT CHORD 10-11=-278/370, 9-10=-278/370, 7-9=-21/615, 5-7=-228/1041
WEBS 2-7=-510/1159, 4-7=-615/504, 2-9=-341/245, 1-9=-42/762

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 6-8-12 to 9-8-12, Interior (1) 9-8-12 to 14-11-8, Exterior (2) 14-11-8 to 17-11-8, Interior (1) 17-11-8 to 30-10-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: , Joint 10 SP No.2 crushing capacity of 565 psi, Joint 5 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 150 lb uplift at joint 11, 254 lb uplift at joint 5 and 92 lb uplift at joint 10.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

January 12,2024

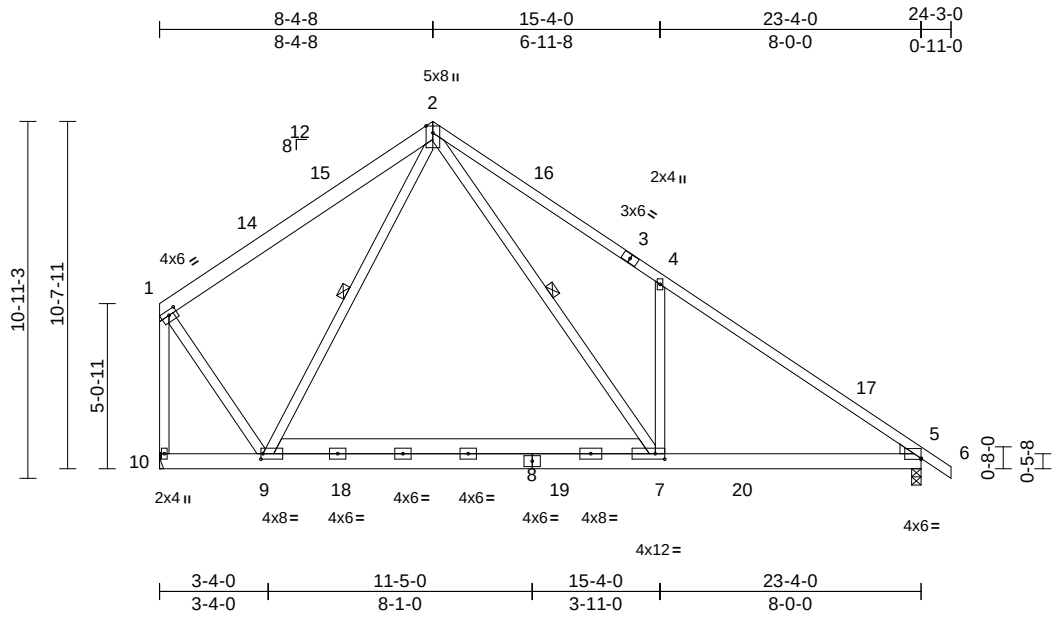
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012612
3822905	A07	Common	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:49
ID:eQ67tsxZDzAbTd3kXpj8AkzahAb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:70.6

Plate Offsets (X, Y): [1:Edge,0-1-12], [5:Edge,0-0-6], [7:0-3-8,0-2-0], [9:0-0-12,0-2-0]

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	0.66	Vert(LL)	-0.09	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.15	7-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.07	7-13	>999	240	Weight: 191 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-2:2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 10-1:2x4 SP No.2
WEDGE	Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-0-3 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 2-7, 2-9

REACTIONS (size) 5=0-3-8, 10= Mechanical
Max Horiz 10=-382 (LC 13)
Max Uplift 5=-259 (LC 13), 10=-238 (LC 13)
Max Grav 5=1071 (LC 20), 10=1003 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-600/204, 2-4=-1483/620, 4-5=-1393/294, 5-6=0/31, 1-10=-1068/232
BOT CHORD	9-10=-278/369, 7-9=-21/615, 5-7=-229/1041
WEBS	2-7=-507/1158, 4-7=-615/504, 2-9=-324/222, 1-9=-74/771

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 6-8-12 to 9-8-12, Interior (1) 9-8-12 to 14-11-8, Exterior (2) 14-11-8 to 17-11-8, Interior (1) 17-11-8 to 30-10-0 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 238 lb uplift at joint 10 and 259 lb uplift at joint 5.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

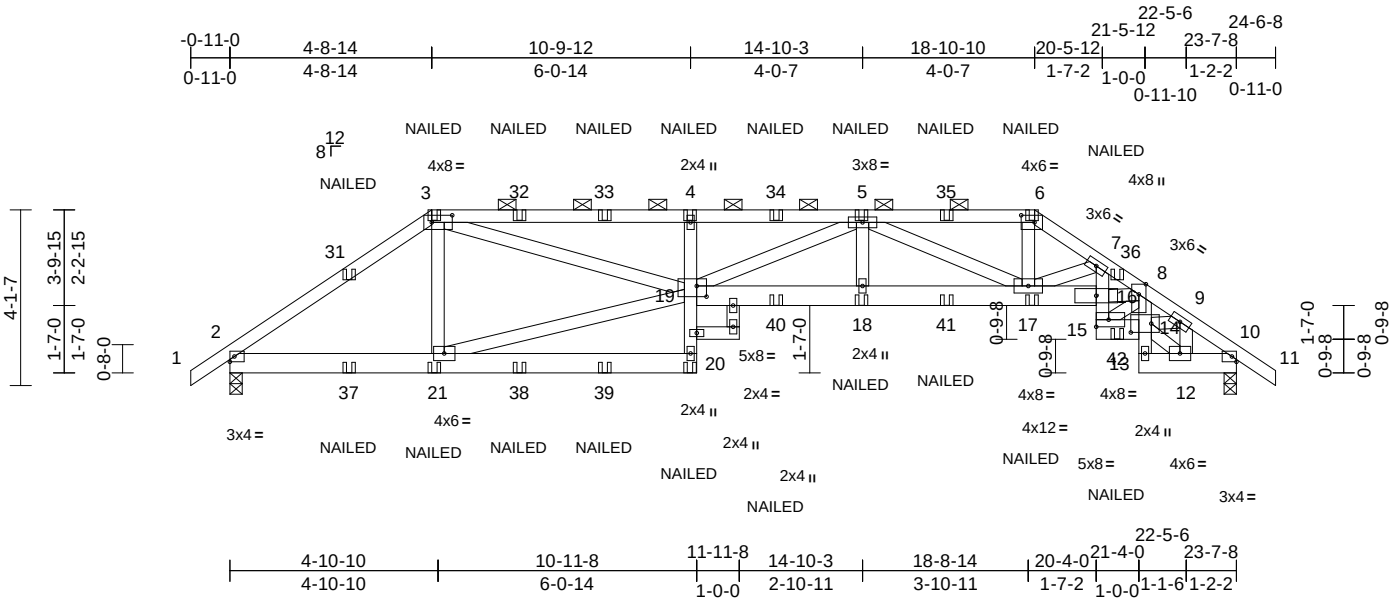
LOAD CASE(S) Standard

January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	B01	Hip Girder	1	2	I63012613 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:50 Page: 1
ID:jpSMU3J76uaqCcs0v?gk1szah2M-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.1

Plate Offsets (X, Y): [3:0-5-12,0-2-0], [6:0-3-12,0-2-0], [14:0-5-12,0-2-8], [19:0-2-12,0-3-0]

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	0.57	Vert(LL)	-0.13	18-19	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.25	18-19	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.33	Horz(CT)	0.13	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.25	18-19	>999	240	Weight: 308 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except*
2-20,19-16,15-14,13-10:2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-11 oc purlins, except
2-0-0 oc purlins (5-6-6 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing. Except:
10-0-0 oc bracing: 19-20

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-127 (LC 6)
Max Uplift 2=-825 (LC 8), 10=-832 (LC 9)
Max Grav 2=1329 (LC 15), 10=1341 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-3=-1854/1216, 3-4=-4148/2901, 4-5=-4172/2886, 5-6=-2825/1886, 6-7=-3242/2133, 7-8=-4536/2956, 8-9=-3170/2073, 9-10=-1482/962, 10-11=0/31
BOT CHORD 2-21=-1051/1578, 20-21=-144/237, 19-20=-29/158, 4-19=-399/412, 18-19=-2694/4073, 17-18=-2694/4073, 16-17=-2519/3996, 15-16=-1111/1713, 7-16=-830/1292, 14-15=-1619/2553, 13-14=-169/282, 8-14=-136/231, 12-13=-300/472, 10-12=-729/1170
WEBS 8-16=-1713/2701, 3-21=-172/223, 19-21=-929/1381, 3-19=-1950/2811, 5-19=-216/229, 5-18=-140/270, 5-17=-1287/925, 6-17=-1023/1592, 7-17=-1387/902, 8-15=-1905/1201, 9-12=-1186/769, 9-14=-957/1496, 12-14=-575/933

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 825 lb uplift at joint 2 and 832 lb uplift at joint 10.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-6=-60, 6-11=-60, 20-25=-20, 16-19=-20, 14-15=-20, 13-28=-20
Concentrated Loads (lb)
Vert: 3=-29 (F), 20=-24 (F), 4=-29 (F), 21=-24 (F), 18=-62 (F), 17=-62 (F), 32=-29 (F), 33=-29 (F), 37=-77 (F), 38=-24 (F), 39=-24 (F), 40=-62 (F), 41=-62 (F), 42=-82 (F)

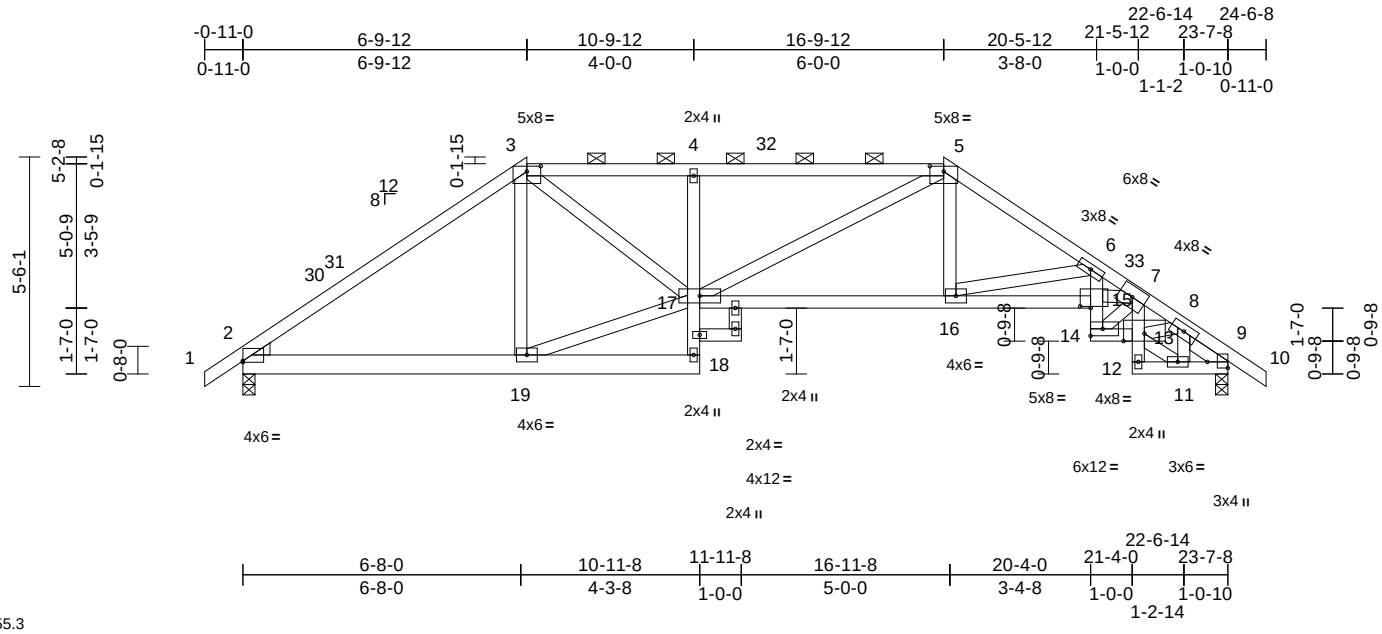
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	B02	Hip	1	1	I63012614 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:51 Page: 1
ID:6I1nrrXMPwN2vdOWcr?Uu9zah3N-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:55.3

Plate Offsets (X, Y): [2:Edge,0-0-6], [3:0-4-0,0-1-9], [5:0-4-0,0-1-9], [9:Edge,0-5-14], [15:0-3-0,0-0-8]

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	0.57	Vert(LL)	-0.12	15-16	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.25	16-17	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.17	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.10	15-16	>999	240	Weight: 148 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 2-18:2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.2 -- 1-1-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-8 oc purlins, except 2-0-0 oc purlins (3-8-11 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 10-0-0 oc bracing: 17-18

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=169 (LC 11)
Max Uplift 2=-217 (LC 12), 9=-217 (LC 13)
Max Grav 2=1000 (LC 1), 9=1000 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-3=-1317/392, 3-4=-1759/561, 4-5=-1798/571, 5-6=-1793/497, 6-7=-3299/868, 7-8=-1933/532, 8-9=-573/169, 9-10=0/31
BOT CHORD 2-19=-309/1000, 18-19=-29/53, 17-18=0/60, 4-17=-373/255, 16-17=-241/1463, 15-16=-748/3051, 14-15=-276/1250, 6-15=-242/1169, 13-14=-375/1612, 12-13=-6/60, 7-13=-3/48, 11-12=-54/222, 9-11=-209/867
WEBS 3-19=-215/134, 5-16=-48/498, 17-19=-232/1014, 3-17=-269/978, 5-17=-263/466, 6-16=-1612/519, 8-11=-555/150, 7-14=-1462/327, 7-15=-513/2229, 8-13=-158/711, 11-13=-202/834

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-9-12, Exterior (2) 6-9-12 to 10-9-12, Interior (1) 10-9-12 to 16-9-12, Exterior (2) 16-9-12 to 21-0-11, Interior (1) 21-0-11 to 24-6-8 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 9 SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 217 lb uplift at joint 2 and 217 lb uplift at joint 9.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) 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

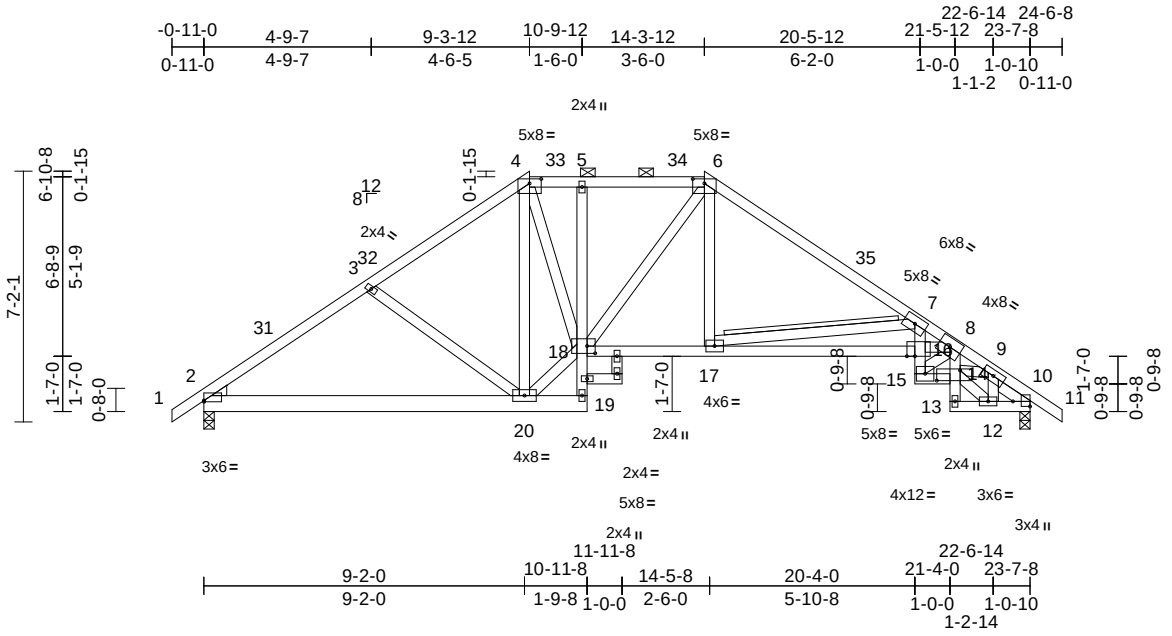
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012615
3822905	B03	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:51 Page: 1
ID:SvBY2UZAFLIPJKG8w2akfHzah4d-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:65.9

Plate Offsets (X, Y): [2:Edge,0-0-6], [4:0-4-0,0-1-9], [6:0-4-0,0-1-9], [10:Edge,0-5-14], [14:0-8-0,0-3-8], [16:0-2-12,Edge], [18:0-2-12,0-2-8]

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	0.68	Vert(LL)	-0.16	16-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.35	16-17	>820	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.22	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.16	16-17	>999	240	Weight: 164 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 2-19:2x6 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SPF No.2(flat)
WEDGE	Left: 2x4 SP No.3
SLIDER	Right 2x4 SP No.2 -- 1-1-4

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-10-14 oc purlins, except 2-0-0 oc purlins (5-4-2 max.): 4-6.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 18-19
WEBS	T-Brace: 2x4 SPF No.2 - 7-17 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=225 (LC 11)
Max Uplift 2=-246 (LC 12), 10=-246 (LC 13)
Max Grav 2=1000 (LC 1), 10=1000 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/31, 2-3=-1338/421, 3-4=-1109/380, 4-5=-1127/415, 5-6=-1137/419, 6-7=-1459/414, 7-8=-3262/828, 8-9=-2337/592, 9-10=-583/159, 10-11=0/31
BOT CHORD	2-20=-304/1052, 19-20=-15/51, 18-19=-128/0, 5-18=-161/129, 17-18=-126/1125, 16-17=-832/3215, 15-16=-198/1154, 7-16=-129/1050, 14-15=-397/1910, 13-14=-8/70, 8-14=-125/611, 12-13=-48/220, 10-12=-200/868
WEBS	4-20=-451/132, 6-17=-34/453, 3-20=-331/267, 7-17=-2197/712, 6-18=-169/139, 18-20=-133/1110, 4-18=-174/869, 9-12=-740/191, 8-15=-1826/319, 8-16=-495/2217, 12-14=-230/971, 9-14=-189/954

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 9-3-12, Exterior (2) 9-3-12 to 13-6-11, Interior (1) 13-6-11 to 14-3-12, Exterior (2) 14-3-12 to 18-6-11, Interior (1) 18-6-11 to 24-6-8 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 10 SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 246 lb uplift at joint 2 and 246 lb uplift at joint 10.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

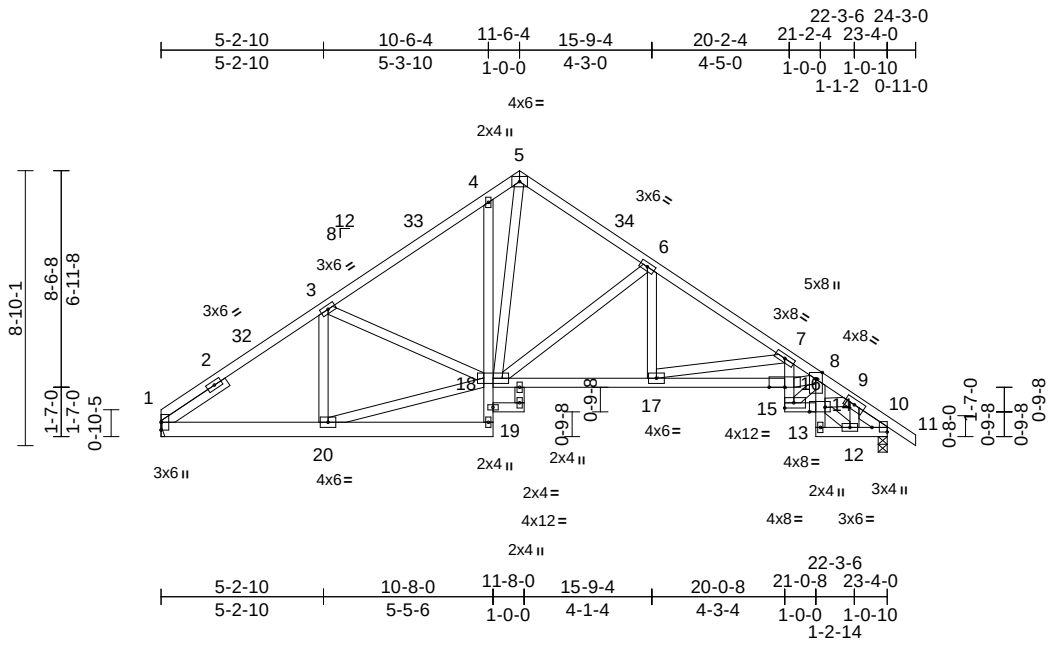
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	B04	Roof Special	4	1	Job Reference (optional)	I63012616

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:52
ID:1dE8lKTf?BVy2kYuHCz98ozah7K-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74

Plate Offsets (X, Y): [10:Edge,0-5-14], [14:0-6-0,Edge], [18:0-0-0,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	0.34	Vert(LL)	-0.11	16-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.24	16-17	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.16	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.12	16-17	>999	240	Weight: 168 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 1-19:2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.2 -- 2-6-0, Right 2x4 SP No.2 -- 1-1-4

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-3-10 oc bracing: 16-17.
10-0-0 oc bracing: 18-19

REACTIONS (size) 1= Mechanical, 10=0-3-8
Max Horiz 1=-276 (LC 8)
Max Uplift 1=-229 (LC 12), 10=-263 (LC 13)
Max Grav 1=932 (LC 1), 10=989 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-1239/339, 3-4=-1216/347, 4-5=-1296/463, 5-6=-1051/344, 6-7=-1619/375, 7-8=-3038/619, 8-9=-2315/500, 9-10=-620/148, 10-11=0/31
BOT CHORD 1-20=-311/1080, 19-20=-6/30, 18-19=0/105, 4-18=-262/242, 17-18=-168/1299, 16-17=-508/2834, 15-16=-187/1183, 7-16=-114/915, 14-15=-328/1893, 13-14=-6/67, 8-14=-86/538, 12-13=-41/225, 10-12=-165/903
WEBS 3-20=-219/135, 3-18=-206/190, 18-20=-318/1091, 6-18=-763/295, 7-17=-1644/454, 5-18=-427/1167, 8-16=-327/1964, 8-15=-1785/290, 9-12=-710/150, 9-14=-154/921, 12-14=-180/977, 6-17=-27/465

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 11-9-12, Exterior (2) 11-9-12 to 14-9-12, Interior (1) 14-9-12 to 24-6-8 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: , Joint 10 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 229 lb uplift at joint 1 and 263 lb uplift at joint 10.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

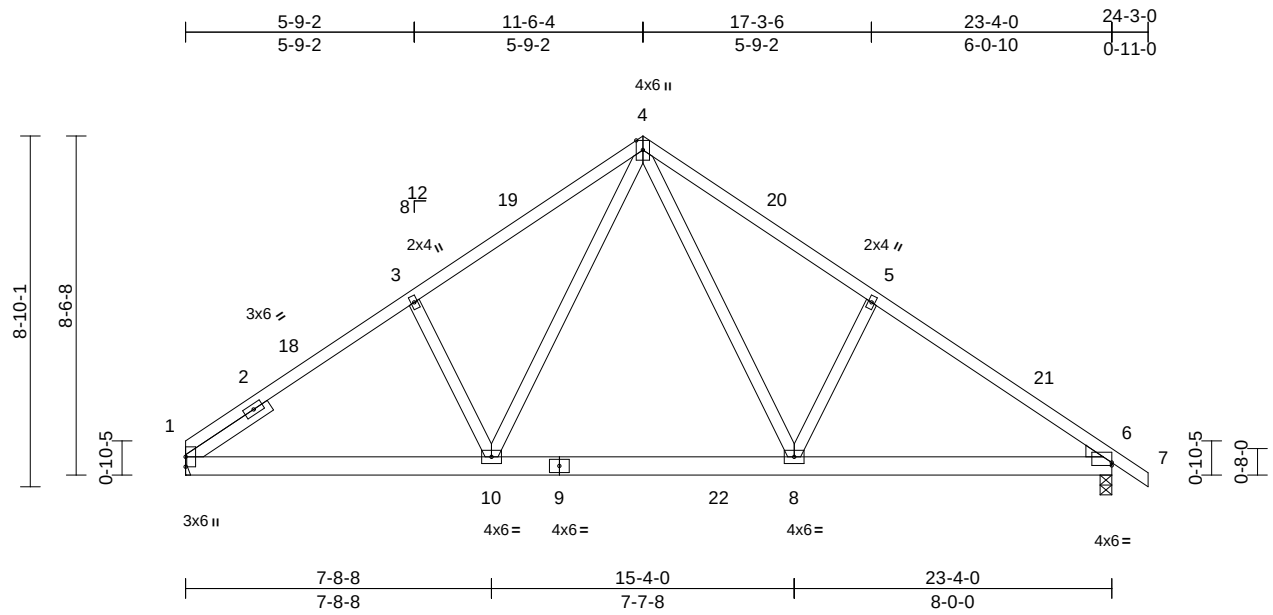
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	B05	Common	4	1	Job Reference (optional)	I63012617

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:52
ID:1dE8lKTf?BVy2kYuHCz98ozah7K-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58

Plate Offsets (X, Y): [6:Edge,0-0-14]

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)	-0.07	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.12	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.04	8-17	>999	240	Weight: 141 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
WEDGE	Right: 2x4 SP No.3
SLIDER	Left 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-8-4 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 6=0-3-8
Max Horiz 1=-276 (LC 8)
Max Uplift 1=-229 (LC 12), 6=-263 (LC 13)
Max Grav 1=932 (LC 1), 6=989 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1218/348, 3-4=-1243/421, 4-5=-1277/420, 5-6=-1304/342, 6-7=0/31
BOT CHORD	1-10=-311/1155, 8-10=-72/768, 6-8=-161/1007
WEBS	4-8=-245/624, 5-8=-413/339, 4-10=-237/575, 3-10=-377/322

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-3-8 to 3-3-8, Interior (1) 3-3-8 to 11-9-12, Exterior (2) 11-9-12 to 14-9-12, Interior (1) 14-9-12 to 24-6-8 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: , Joint 6 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 229 lb uplift at joint 1 and 263 lb uplift at joint 6.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

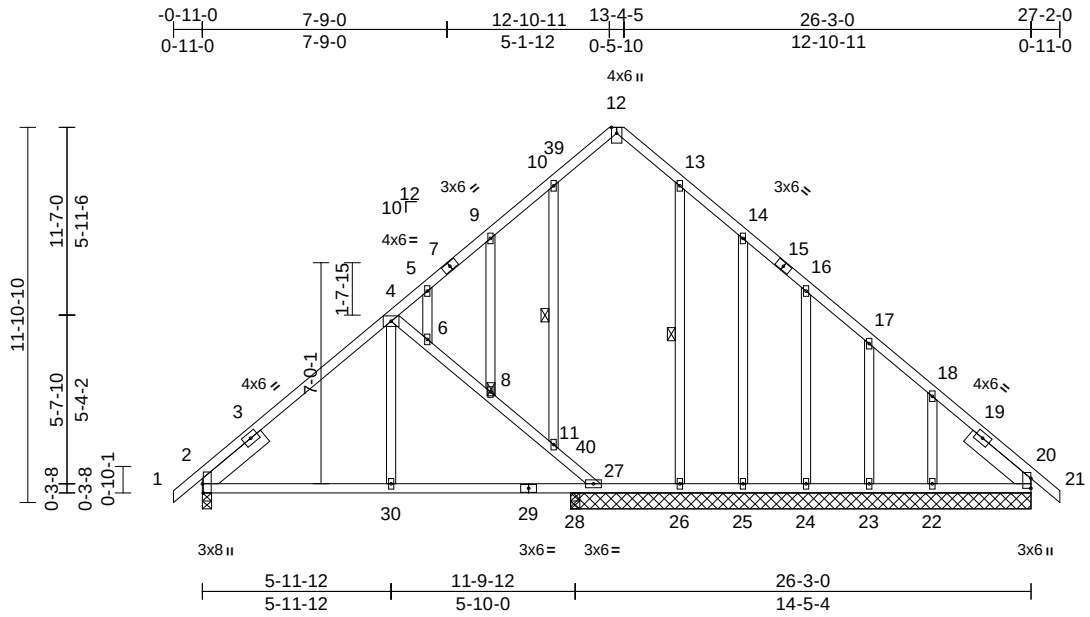
LOAD CASE(S) Standard

January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	C01	Common Structural Gable	1	1	I63012618 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:53 Page: 1
ID:Q19slwjyRvIYcXEG6SGZWEzaPDo-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:73

Plate Offsets (X, Y): [2:0-3-8,Edge], [20:0-3-12,0-0-1]

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	0.57	Vert(LL)	0.06	30-33	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.06	30-33	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.26	Horz(CT)	-0.03	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 195 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 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 2-6-0

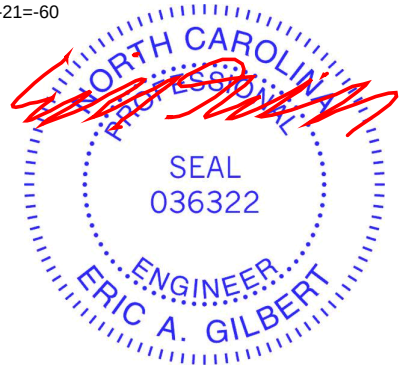
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-11, 13-26
JOINTS 1 Brace at Jt(s): 8

REACTIONS (size) 2=0-3-8, 20=14-7-0, 22=14-7-0, 23=14-7-0, 24=14-7-0, 25=14-7-0, 26=14-7-0, 27=14-7-0, 28=0-3-8, 35=14-7-0
Max Horiz 2=-387 (LC 10)
Max Uplift 2=-37 (LC 12), 20=-50 (LC 11), 22=-318 (LC 13), 23=-66 (LC 13), 24=-136 (LC 13), 25=-164 (LC 13), 26=-45 (LC 8), 27=-313 (LC 12), 35=-50 (LC 11)
Max Grav 2=624 (LC 1), 20=363 (LC 22), 22=305 (LC 20), 23=147 (LC 20), 24=198 (LC 20), 25=182 (LC 20), 26=212 (LC 20), 27=329 (LC 19), 28=405 (LC 19), 35=363 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-4=-449/20, 4-5=-229/36, 5-9=-195/48, 9-10=-141/88, 10-12=-168/130, 12-13=-162/127, 13-14=-171/106, 14-16=-195/71, 16-17=-245/113, 17-18=-321/154, 18-20=-515/326, 20-21=0/35, 4-6=-548/319, 6-8=-571/331, 8-11=-633/380, 11-27=-749/441
BOT CHORD 2-30=-321/597, 28-30=-179/597, 27-28=-179/597, 26-27=-288/470, 25-26=-288/470, 24-25=-288/470, 23-24=-288/470, 22-23=-288/470, 20-22=-288/470
WEBS 10-11=-209/108, 8-9=-85/87, 5-6=-33/21, 13-26=-138/73, 14-25=-209/185, 16-24=-182/155, 17-23=-142/112, 18-22=-308/286, 4-30=0/250

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 13-1-8, Corner (3) 13-1-8 to 16-1-8, Exterior (2) 16-1-8 to 27-2-0 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) 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
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 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 2, 45 lb uplift at joint 26, 164 lb uplift at joint 25, 136 lb uplift at joint 24, 66 lb uplift at joint 23, 318 lb uplift at joint 22, 313 lb uplift at joint 27, 50 lb uplift at joint 20 and 50 lb uplift at joint 20.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Load case(s) 1 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 30-31=-20, 28-35=-20, 1-4=-60, 12-39=-60, 12-21=-60



January 12,2024

Continued on page 2

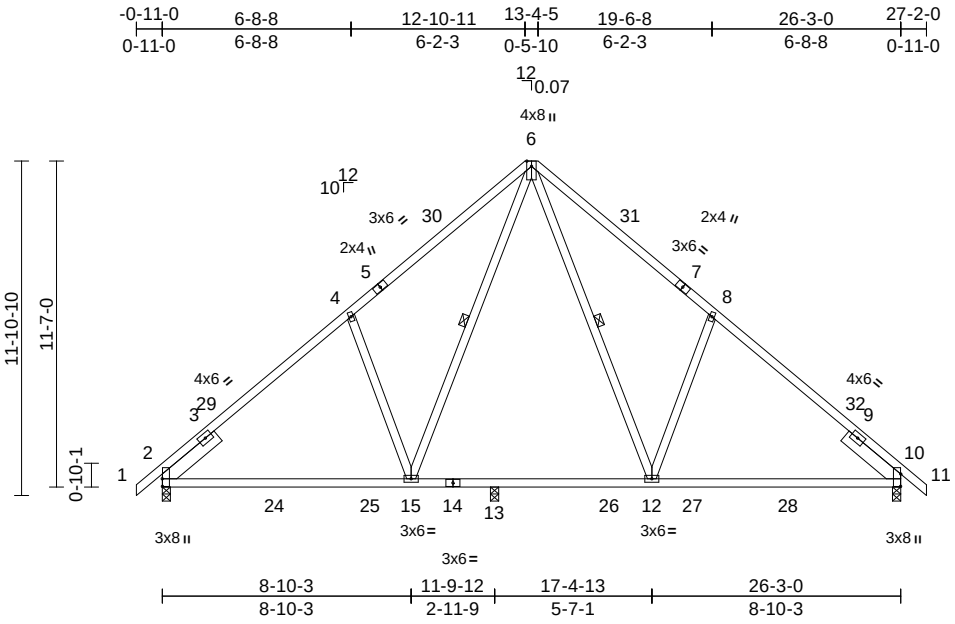
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Trapezoidal Loads (lb/ft)
Vert: 30=-21 (F=-1)-to-29=-26 (F=-6), 29=-26 (F=-6)-to-28=-28 (F=-8), 4=-61 (F=-1)-to-5=-62 (F=-2), 5=-62 (F=-2)-to-7=-63 (F=-3), 7=-63 (F=-3)-to-9=-65 (F=-5), 9=-65 (F=-5)-to-10=-67 (F=-7), 10=-67 (F=-7)-to-39=-68 (F=-8), 4=-1 (F)-to-6=-2 (F), 6=-2 (F)-to-8=-5 (F), 8=-5 (F)-to-11=-7 (F), 11=-7 (F)-to-40=-8 (F)

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	C02	Common	2	1	Job Reference (optional)	I63012619

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:53
ID:6N79maJkv2lTVt7wBlwSgczagC8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.9

Plate Offsets (X, Y): [2:0-3-4,0-0-1], [10:0-5-4,0-0-1]

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	0.56	Vert(LL)	-0.13	15-18	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.25	15-18	>559	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.39	Horz(CT)	-0.03	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.11	15-18	>999	240	Weight: 159 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-3-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-7-10 oc bracing.
WEBS	1 Row at midpt 6-12, 6-15

REACTIONS (size) 2=0-3-8, 10=0-3-8, 13=0-3-8
Max Horiz 2=-387 (LC 10)
Max Uplift 2=-291 (LC 12), 10=-288 (LC 13)
Max Grav 2=1112 (LC 19), 10=1128 (LC 20), 13=166 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/35, 2-4=-1204/386, 4-6=-1292/543, 6-8=-1300/536, 8-10=-1232/379, 10-11=0/35
BOT CHORD	2-15=-454/1115, 13-15=-51/743, 12-13=-51/743, 10-12=-219/939
WEBS	6-12=-364/711, 8-12=-490/437, 6-15=-379/650, 4-15=-491/436

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 13-1-8, Exterior (2) 13-1-8 to 16-1-8, Interior (1) 16-1-8 to 27-2-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 291 lb uplift at joint 2 and 288 lb uplift at joint 10.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

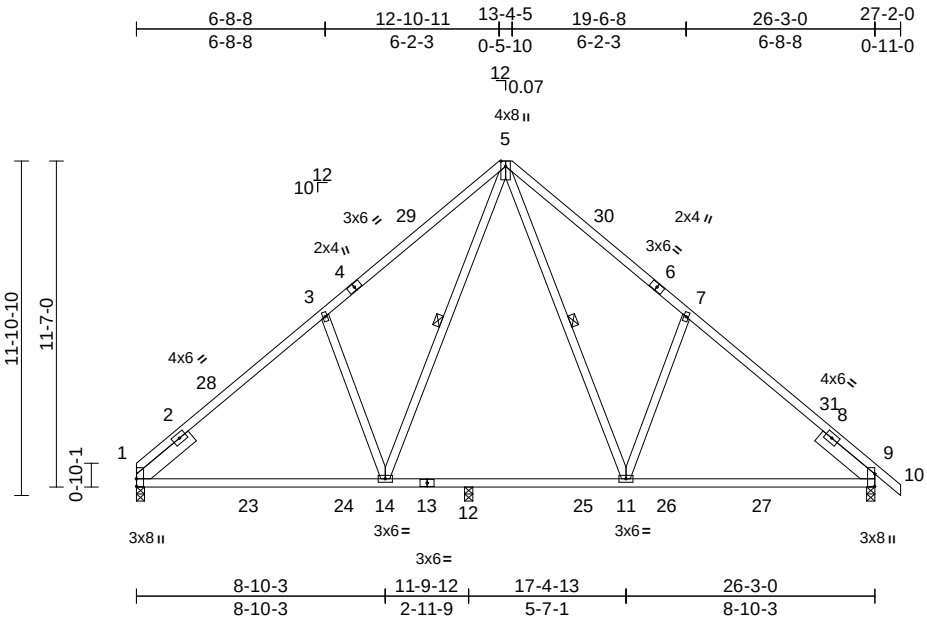
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	C03	Common	3	1	I63012620 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:54 Page: 1
ID:UnguwcDribf3S9CHRxmW3xzag9g-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.9

Plate Offsets (X, Y): [1:0-3-4,0-0-1], [9:0-5-4,0-0-1]

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	0.56	Vert(LL)	-0.13	14-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.26	14-17	>555	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.39	Horz(CT)	-0.03	1	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.11	14-17	>999	240	Weight: 157 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-3-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-7-1 oc bracing.
WEBS	1 Row at midpt 5-11, 5-14

REACTIONS (size) 1=0-3-8, 9=0-3-8, 12=0-3-8
Max Horiz 1=-379 (LC 8)
Max Uplift 1=-261 (LC 12), 9=-288 (LC 13)
Max Grav 1=1059 (LC 19), 9=1129 (LC 20), 12=165 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1173/396, 3-5=-1293/553, 5-7=-1302/537, 7-9=-1235/380, 9-10=0/35
BOT CHORD	1-14=-458/1120, 12-14=-52/745, 11-12=-52/745, 9-11=-219/941
WEBS	5-11=-364/711, 7-11=-490/437, 5-14=-381/656, 3-14=-491/437

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 13-1-8, Exterior (2) 13-1-8 to 16-1-8, Interior (1) 16-1-8 to 27-2-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 261 lb uplift at joint 1 and 288 lb uplift at joint 9.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

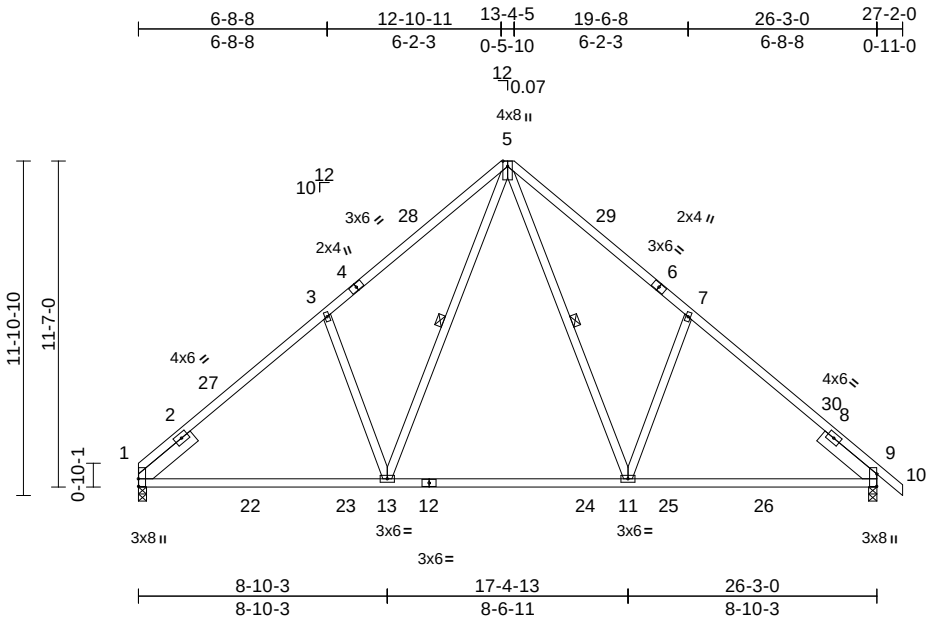
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	C04	Common	1	1	I63012621
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:54 Page: 1
ID:UnguwcDribf3S9CHRxmW3xzag9g-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.9

Plate Offsets (X, Y): [1:0-3-4,0-0-1], [9:0-5-4,0-0-1]

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	0.56	Vert(LL)	-0.18	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.27	11-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.11	13-16	>999	240	Weight: 157 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-2-12 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-11-7 oc bracing.
WEBS	1 Row at midpt 5-11, 5-13

REACTIONS (size) 1=0-3-8, 9=0-3-8
Max Horiz 1=-379 (LC 10)
Max Uplift 1=-240 (LC 12), 9=-271 (LC 13)
Max Grav 1=1145 (LC 19), 9=1200 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1352/358, 3-5=-1338/517, 5-7=-1338/509, 7-9=-1351/352, 9-10=0/35
BOT CHORD	1-13=-436/1223, 11-13=-35/815, 9-11=-203/1024
WEBS	5-11=-352/763, 7-11=-486/440, 5-13=-353/768, 3-13=-485/441

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 13-1-8, Exterior (2) 13-1-8 to 16-1-8, Interior (1) 16-1-8 to 27-2-0 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 240 lb uplift at joint 1 and 271 lb uplift at joint 9.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

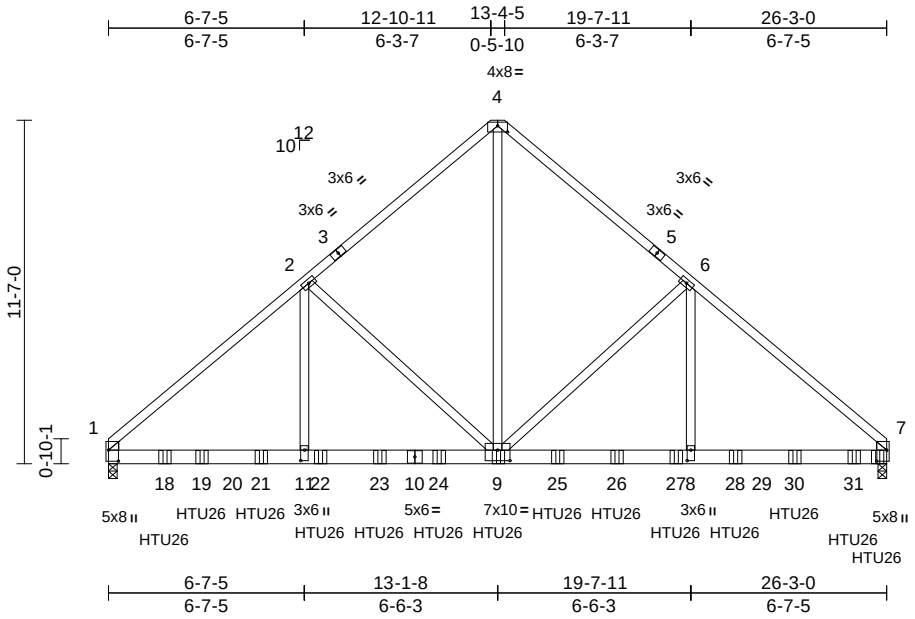
LOAD CASE(S) Standard

January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	C05	Common Girder	1	3	I63012622 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:55 Page: 1
ID:CnONIHAnKZU_p8AH0K9oENzag8S-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:77.7

Plate Offsets (X, Y): [1:0-4-8,0-4-0], [4:0-4-0,0-2-8], [7:0-4-8,0-4-0], [8:0-4-4,0-1-8], [9:0-5-0,0-4-4], [11:0-4-4,0-1-8]

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	0.65	Vert(LL)	-0.11	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.22	9-11	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.11	8-9	>999	240	Weight: 514 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

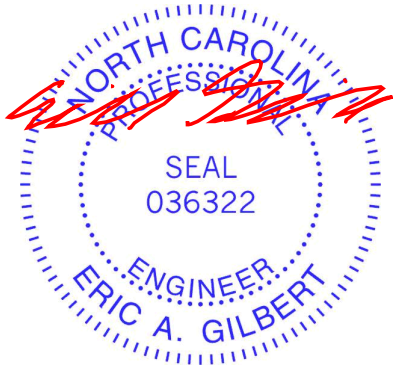
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 7=0-3-8
Max Horiz 1=-362 (LC 23)
Max Uplift 1=-1504 (LC 8), 7=-1976 (LC 9)
Max Grav 1=6825 (LC 15), 7=7813 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-8331/1856, 2-4=-5749/1535, 4-6=-5748/1535, 6-7=-8170/2040
BOT CHORD 1-11=-1502/6535, 9-11=-1502/6535, 8-9=-1463/6214, 7-8=-1463/6214
WEBS 4-9=-1703/6784, 2-9=-2777/779, 6-9=-2618/974, 6-8=-740/3032, 2-11=-492/3201

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1504 lb uplift at joint 1 and 1976 lb uplift at joint 7.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Use Simpson Strong-Tie HTU26 (20-16d Girder, 11-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-10-14 from the left end to 25-11-6 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 12-15=-20, 1-4=-60, 4-7=-60
Concentrated Loads (lb)
Vert: 9=-912 (B), 17=-919 (B), 18=-767 (B), 19=-835 (B), 21=-802 (B), 22=-802 (B), 23=-802 (B), 24=-906 (B), 25=-912 (B), 26=-912 (B), 27=-912 (B), 28=-912 (B), 30=-912 (B), 31=-912 (B)



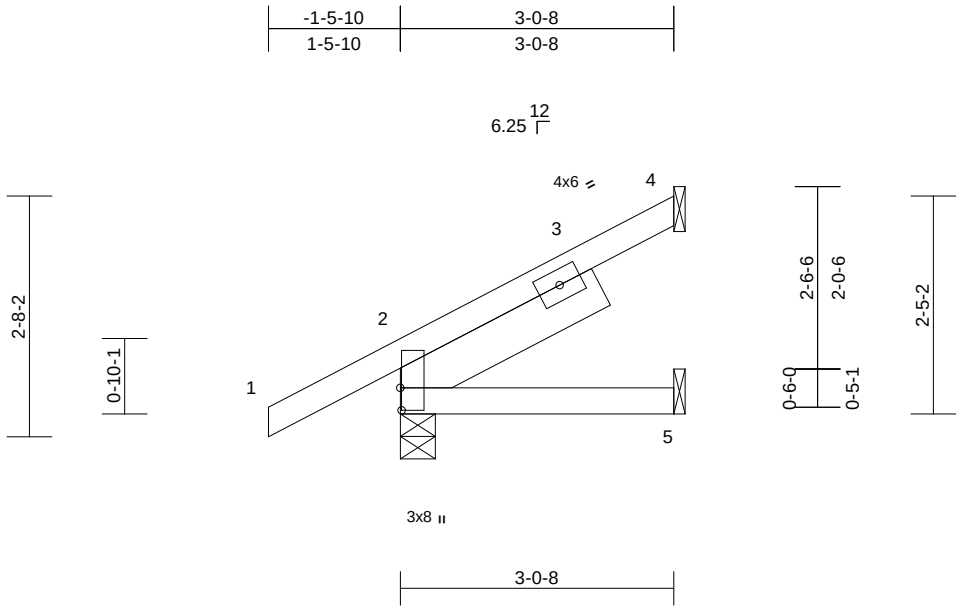
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	CJ1	Jack-Open Girder	4	1	I63012623 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:55 Page: 1
ID:Vx1WvUW6JWz_UunHqp7F3YzahDj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.6

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

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	0.17	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.01	5-8	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 18 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-11, 4= Mechanical, 5= Mechanical
Max Horiz 2=137 (LC 12)
Max Uplift 2=-93 (LC 12), 4=-89 (LC 12), 5=-6 (LC 12)
Max Grav 2=140 (LC 1), 4=54 (LC 4), 5=34 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-4=-132/128
BOT CHORD 2-5=-83/50

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 4, 93 lb uplift at joint 2 and 6 lb uplift at joint 5.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60
Trapezoidal Loads (lb/ft)
Vert: 2=0 (F=30, B=30)-to-7=-9 (F=26, B=26), 7=-9 (F=26, B=26)-to-3=-30 (F=15, B=15), 3=-30 (F=15, B=15)-to-4=-46 (F=7, B=7), 6=0 (F=10, B=10)-to-8=-3 (F=9, B=9), 8=-3 (F=9, B=9)-to-5=-15 (F=2, B=2)

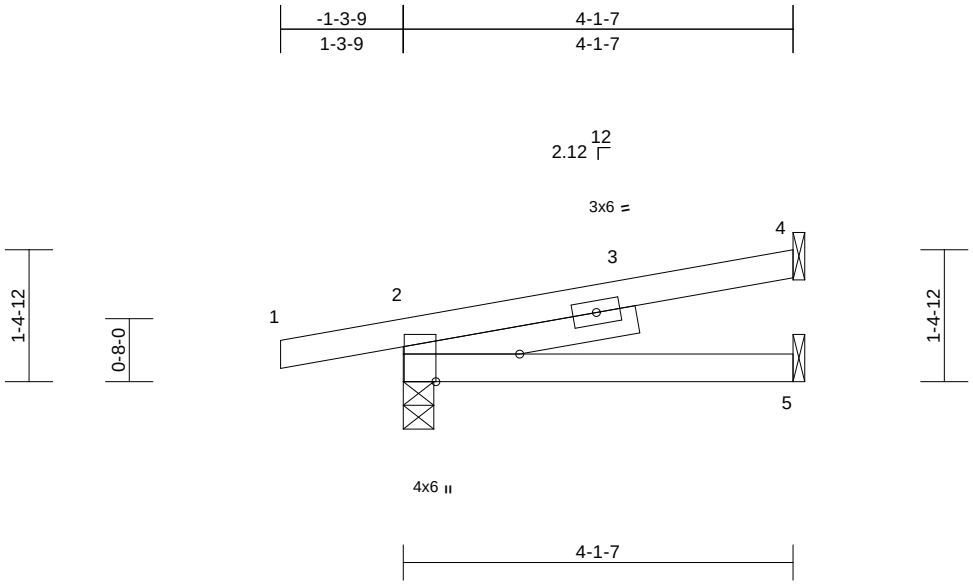
NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	CJ2	Diagonal Hip Girder	2	1	I63012624 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:56 Page: 1
ID:0vMngbB?l8NUJPtyIGua3pzaQHd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.3

Plate Offsets (X, Y): [2:0-3-8,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	0.18	Vert(LL)	0.02	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	5-8	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 18 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-14, 4= Mechanical, 5= Mechanical
Max Horiz 2=50 (LC 6)
Max Uplift 2=-178 (LC 6), 4=-64 (LC 6), 5=-32 (LC 6)
Max Grav 2=146 (LC 1), 4=69 (LC 1), 5=54 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/14, 2-4=-122/185
BOT CHORD 2-5=-102/18

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 4, 178 lb uplift at joint 2 and 32 lb uplift at joint 5.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60
Trapezoidal Loads (lb/ft)
Vert: 2=0 (F=30, B=30)-to-7=-19 (F=21, B=21), 7=-19 (F=21, B=21)-to-3=-35 (F=13, B=13), 3=-35 (F=13, B=13)-to-4=-62 (F=-1, B=-1), 6=0 (F=10, B=10)-to-8=-6 (F=7, B=7), 8=-6 (F=7, B=7)-to-5=-21 (F=0, B=0)

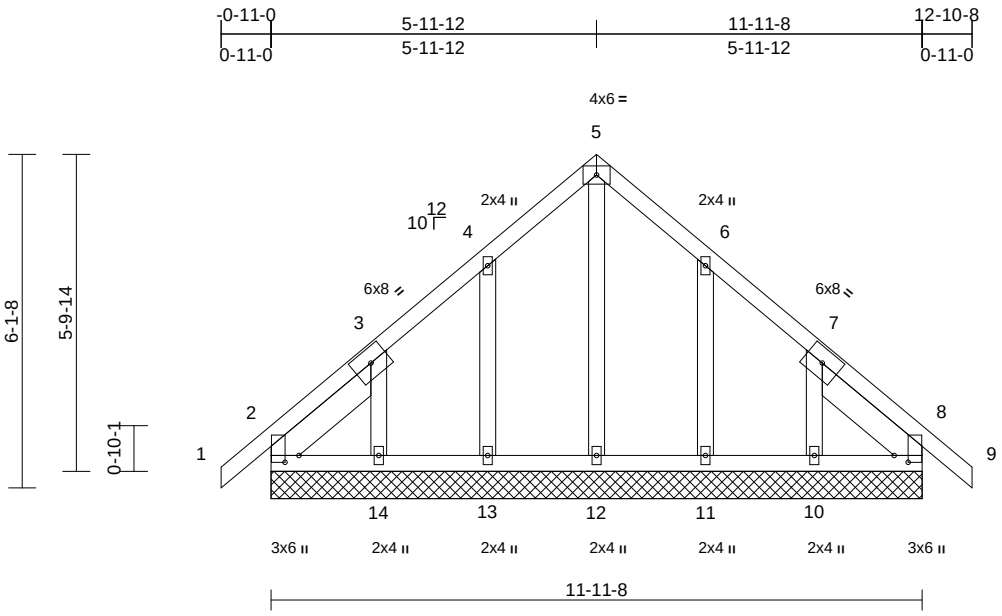
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	D01	Common Supported Gable	1	1	Job Reference (optional)	I63012625

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:56
ID:ElB4YDR4I02SltzDT50fJpzag5X-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:42.3

Plate Offsets (X, Y): [2:0-1-8,0-3-1], [8:0-1-8,0-3-1]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 81 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 2-5-15, Right 2x6 SP No.2 -- 2-5-15

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=11-11-8, 8=11-11-8, 10=11-11-8, 11=11-11-8, 12=11-11-8, 13=11-11-8, 14=11-11-8, 15=11-11-8, 19=11-11-8
Max Horiz 2=192 (LC 11), 15=192 (LC 11)
Max Uplift 2=-59 (LC 8), 8=-15 (LC 9), 10=-170 (LC 13), 11=-130 (LC 13), 13=-131 (LC 12), 14=-177 (LC 12), 15=-59 (LC 8), 19=-15 (LC 9)
Max Grav 2=184 (LC 20), 8=158 (LC 1), 10=197 (LC 20), 11=197 (LC 20), 12=158 (LC 22), 13=198 (LC 19), 14=205 (LC 19), 15=184 (LC 20), 19=158 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/35, 2-3=-75/38, 3-4=-118/95, 4-5=-152/165, 5-6=-152/165, 6-7=-74/52, 7-8=-70/31, 8-9=0/35
BOT CHORD	2-14=-97/156, 13-14=-97/156, 12-13=-97/156, 11-12=-97/156, 10-11=-97/156, 8-10=-97/156
WEBS	5-12=-124/60, 4-13=-189/160, 3-14=-209/185, 6-11=-189/158, 7-10=-212/178

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 1-11-12, Exterior (2) 1-11-12 to 5-11-12, Corner (3) 5-11-12 to 8-11-12, Exterior (2) 8-11-12 to 12-10-8 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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 2, 15 lb uplift at joint 8, 131 lb uplift at joint 13, 177 lb uplift at joint 14, 130 lb uplift at joint 11, 170 lb uplift at joint 10, 59 lb uplift at joint 2 and 15 lb uplift at joint 8.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

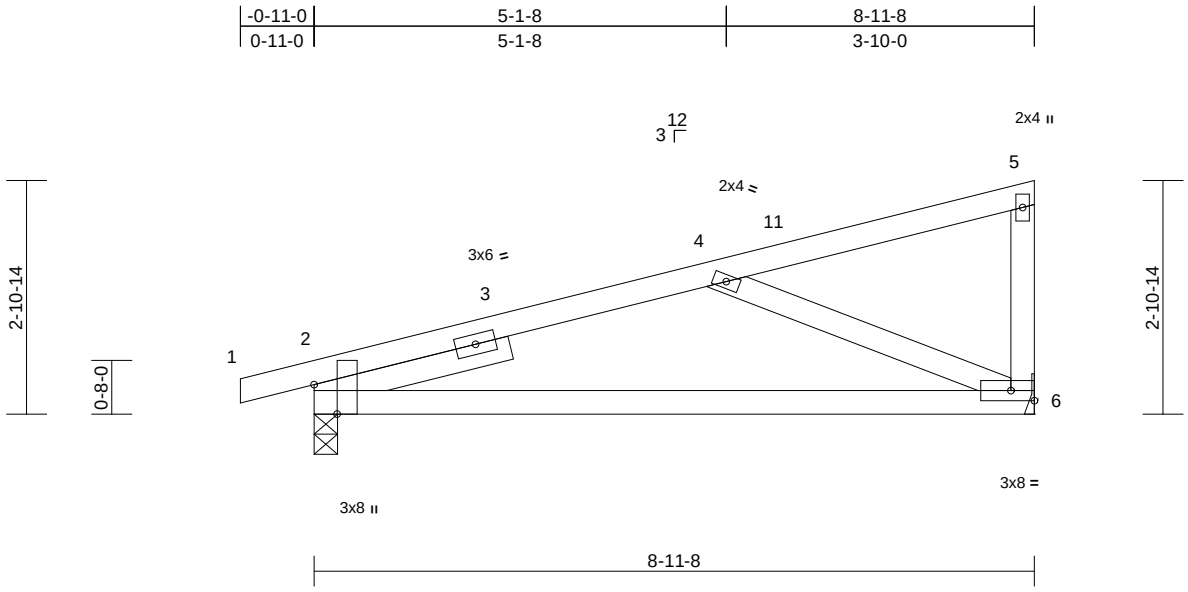
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	E01	Monopitch	6	1	Job Reference (optional)	I63012626

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:56 Page: 1
ID:NK6pagqpaEjbKy9N6htnOizaQl4-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:28.7

Plate Offsets (X, Y): [2:0-4-6,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	0.62	Vert(LL)	0.28	6-9	>372	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.23	6-9	>465	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	-0.02	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 42 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 6-4:2x4 SP No.3
SLIDER Left 2x4 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-3-8 oc bracing.

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=131 (LC 8)
Max Uplift 2=-269 (LC 8), 6=-250 (LC 8)
Max Grav 2=410 (LC 1), 6=350 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-4=-836/1253, 4-5=-67/56, 5-6=-85/77
BOT CHORD 2-6=-559/497
WEBS 4-6=-502/532

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 8-9-12 zone; cantilever left and right exposed ; end vertical left 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 269 lb uplift at joint 2 and 250 lb uplift at joint 6.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

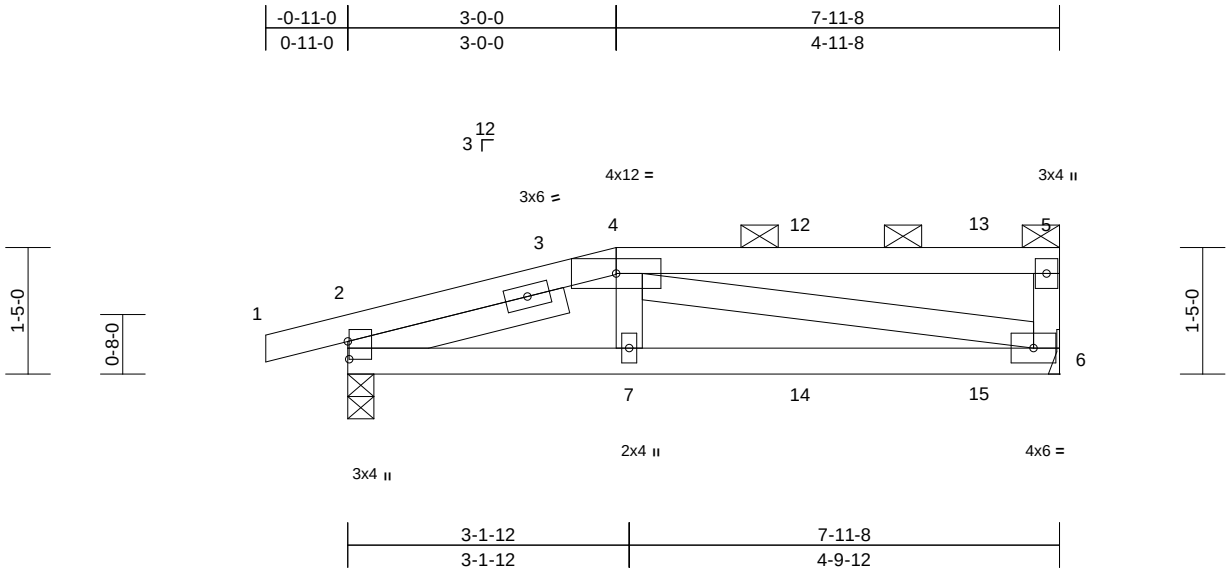
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	E02	Half Hip Girder	1	1	Job Reference (optional)	I63012627

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:56
ID:RIdB?3rt1kBpni?KTcsFGCzaQGn-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.8

Plate Offsets (X, Y): [2:0-2-6,0-0-3]

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	0.39	Vert(LL)	-0.02	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.04	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.22	Horz(CT)	-0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.05	6-7	>999	240	Weight: 38 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD	Rigid ceiling directly applied or 7-6-14 oc bracing.

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=55 (LC 23)
Max Uplift 2=-336 (LC 4), 6=-302 (LC 4)
Max Grav 2=405 (LC 1), 6=377 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-4=-655/592, 4-5=-115/88, 5-6=-175/128
BOT CHORD	2-7=-578/641, 6-7=-589/653
WEBS	4-7=-86/173, 4-6=-553/515

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 302 lb uplift at joint 6 and 336 lb uplift at joint 2.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 71 lb down and 114 lb up at 3-0-0, and 34 lb down and 38 lb up at 5-0-12, and 34 lb down and 40 lb up at 7-0-12 on top chord, and 67 lb down and 104 lb up at 3-0-0, and 18 lb down and 40 lb up at 5-0-12, and 20 lb down and 39 lb up at 7-0-12 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

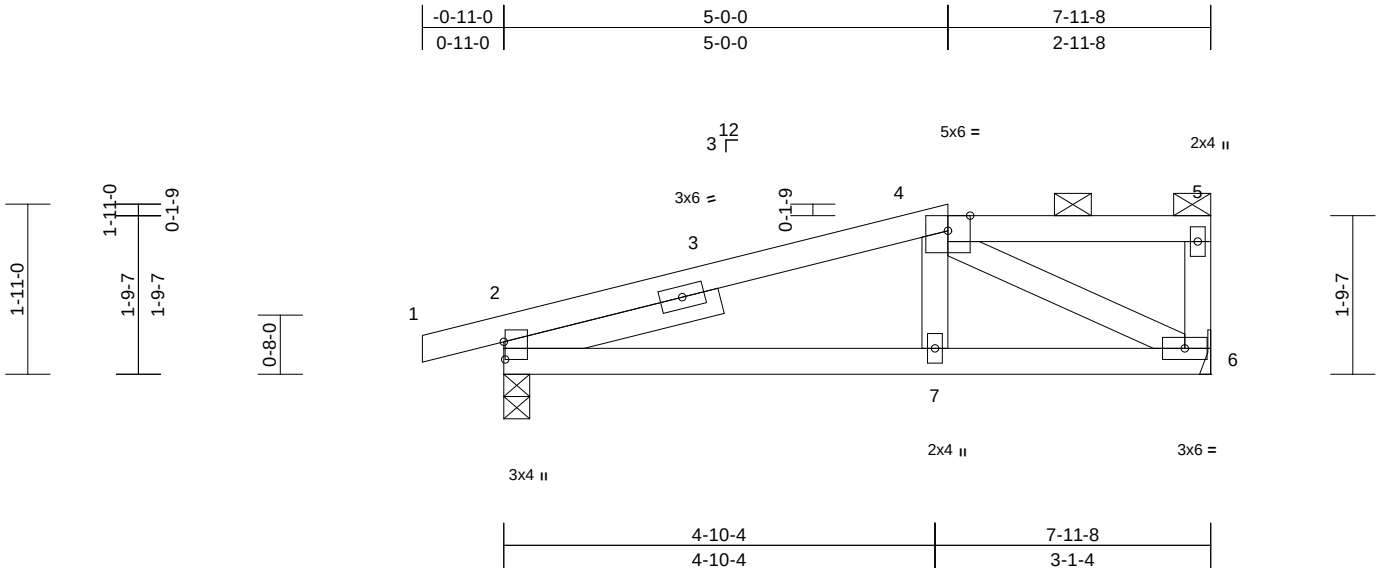
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-5=-60, 6-8=-20
Concentrated Loads (lb)
Vert: 4=-11 (F), 7=-23 (F), 12=-11 (F), 13=-19 (F), 14=-18 (F), 15=-20 (F)

January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012628
3822905	E03	Half Hip	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:57 Page: 1
ID:Vj4jHpRcVnMsAEFlrPEklXzaQG0-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.9

Plate Offsets (X, Y): [2:0-2-6,0-0-3]

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	0.26	Vert(LL)	0.04	7-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.03	7-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-6:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 7-0-14 oc bracing.

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=75 (LC 8)
Max Uplift 2=-255 (LC 8), 6=-211 (LC 8)
Max Grav 2=371 (LC 1), 6=309 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-4=-427/643, 4-5=-21/26, 5-6=-86/81
BOT CHORD 2-7=-651/417, 6-7=-627/407
WEBS 4-7=-256/165, 4-6=-448/693

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-0-0, Exterior (2) 5-0-0 to 7-9-12 zone; cantilever left and right exposed ; end vertical left 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
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 2 and 211 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) 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

January 12,2024

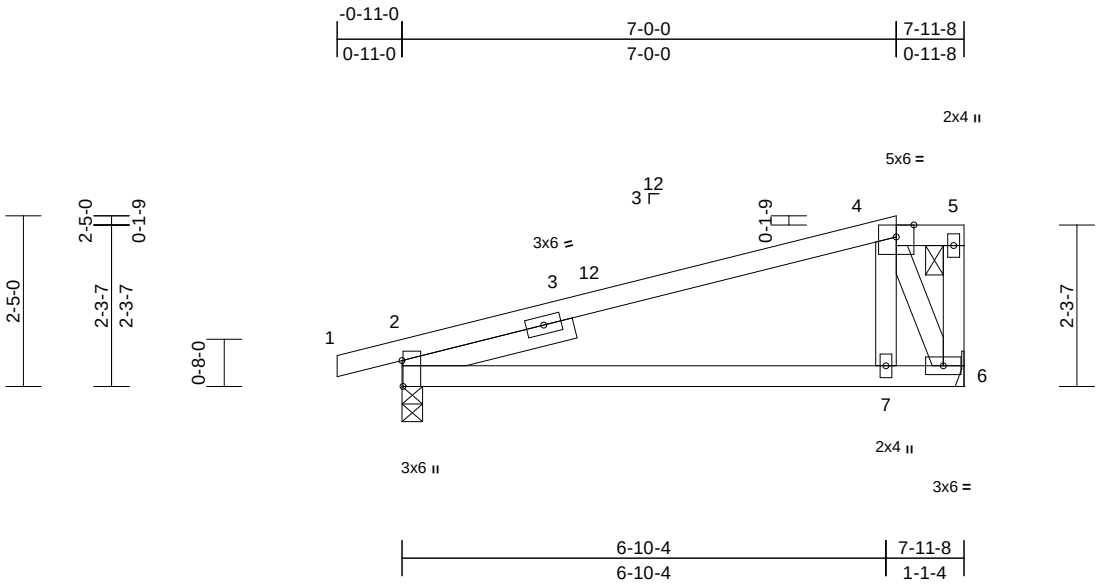
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012629
3822905	E04	Half Hip	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:57

ID:13aBC5qJjwWBdJG5GqKTaUzaQFV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.6

Plate Offsets (X, Y): [2:0-4-6,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	0.49	Vert(LL)	-0.05	7-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.10	7-10	>898	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.02	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.07	7-10	>999	240	Weight: 37 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-6:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=107 (LC 11)
Max Uplift 2=-159 (LC 8), 6=-113 (LC 8)
Max Grav 2=371 (LC 1), 6=309 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-4=-348/114, 4-5=-43/49, 5-6=-135/147
BOT CHORD 2-7=-359/319, 6-7=-182/249
WEBS 4-7=-40/353, 4-6=-667/411

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 7-0-0, Exterior (2) 7-0-0 to 7-9-12 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
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 159 lb uplift at joint 2 and 113 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) 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

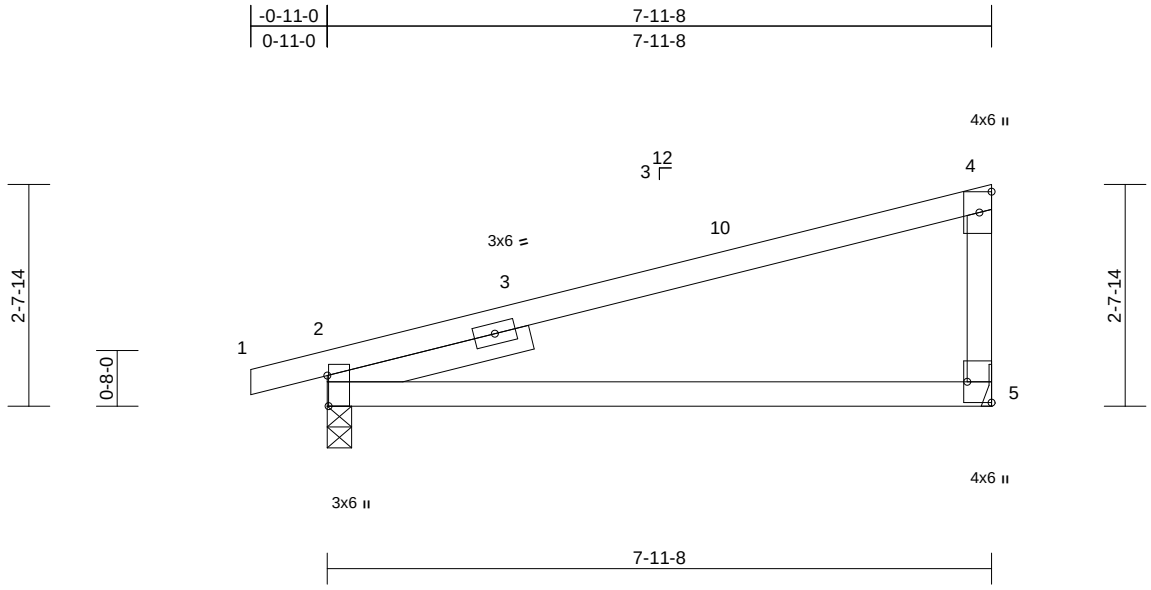
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	E05	Monopitch	8	1	Job Reference (optional)	I63012630

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:57
ID:2cd2LjEejNoMiXtdGzxSyfzaQEz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.6

Plate Offsets (X, Y): [2:0-4-6,Edge], [5: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	0.72	Vert(LL)	0.31	5-8	>299	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.24	5-8	>395	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.04	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 32 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-8-12 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical
Max Horiz 2=118 (LC 8)
Max Uplift 2=-245 (LC 8), 5=-222 (LC 8)
Max Grav 2=371 (LC 1), 5=309 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-4=-490/744, 4-5=-197/199
BOT CHORD 2-5=-311/308

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 7-9-12 zone; cantilever left and right exposed ; end vertical left 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 222 lb uplift at joint 5 and 245 lb uplift at joint 2.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

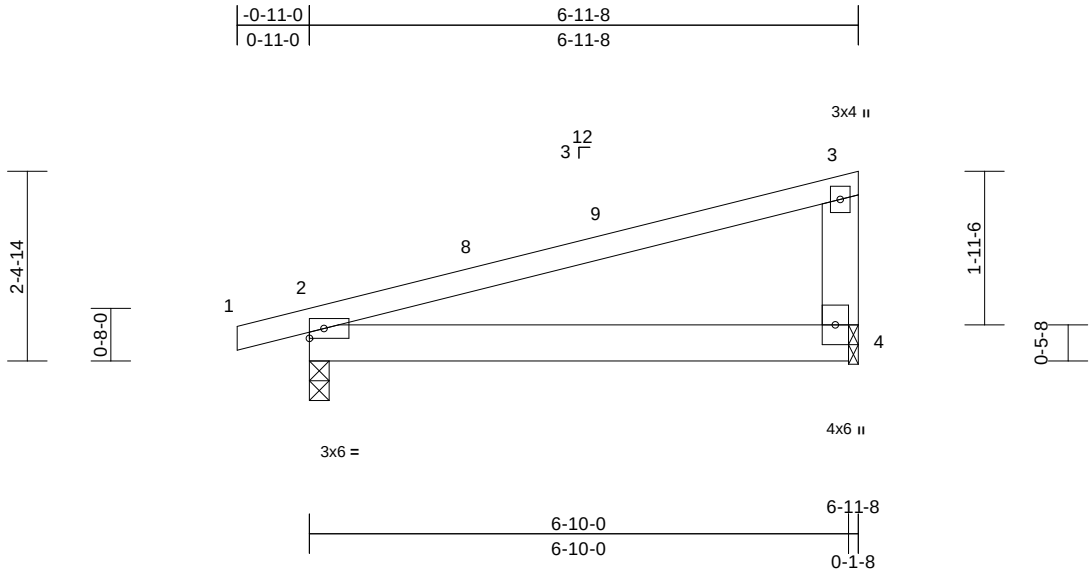
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012631
3822905	E06	Monopitch	6	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:58
ID:tr50t083I67savXrbWGoyGzaQDp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.2

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	0.42	Vert(LL)	0.07	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	4-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 4=0-1-8
Max Horiz 2=104 (LC 8)
Max Uplift 2=-219 (LC 8), 4=-190 (LC 8)
Max Grav 2=328 (LC 1), 4=265 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-181/168, 3-4=-153/150
BOT CHORD 2-4=-165/120

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-8-12 zone; cantilever left and right exposed ; end vertical left 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 219 lb uplift at joint 2 and 190 lb uplift at joint 4.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

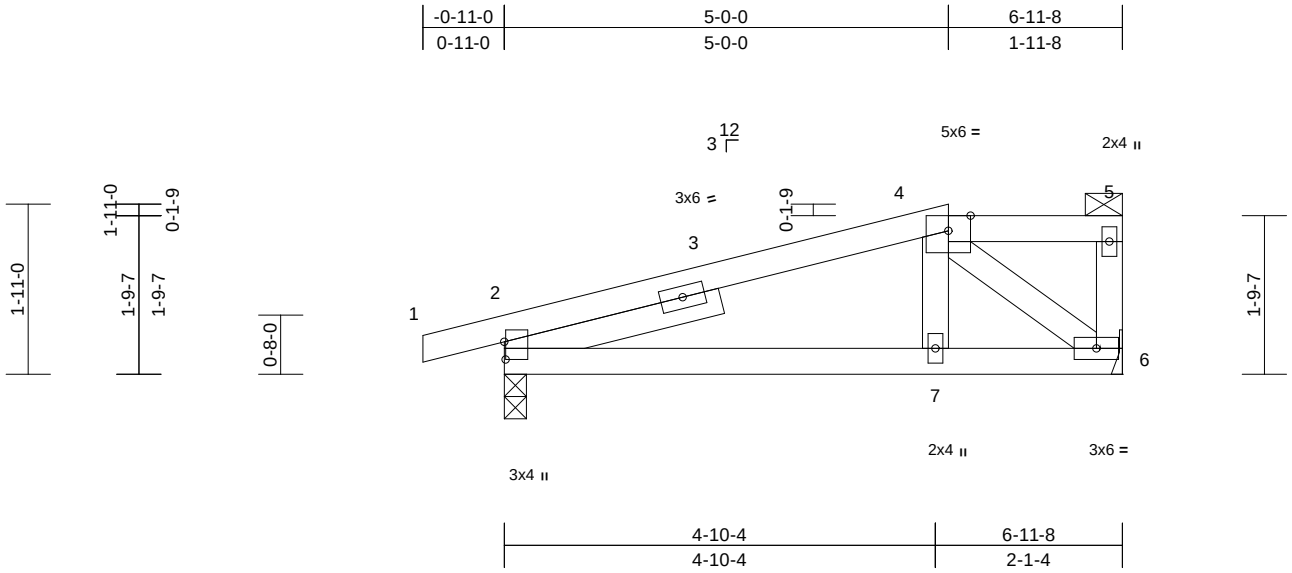
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	E07	Half Hip	1	1	Job Reference (optional)	I63012632

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:58
ID:xGZY9nkolAIvzRnGzJeISbzaQD2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.9

Plate Offsets (X, Y): [2:0-2-6,0-0-3]

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	0.26	Vert(LL)	0.04	7-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.03	7-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 33 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 5-6:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD	Rigid ceiling directly applied or 8-1-5 oc bracing.

REACTIONS (size) 2=0-3-0, 6= Mechanical
Max Horiz 2=75 (LC 8)
Max Uplift 2=-228 (LC 8), 6=-185 (LC 8)
Max Grav 2=331 (LC 1), 6=269 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/13, 2-4=-310/473, 4-5=-6/4, 5-6=-47/36
BOT CHORD	2-7=-488/302, 6-7=-463/291
WEBS	4-7=-270/164, 4-6=-383/611

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-0-0, Exterior (2) 5-0-0 to 6-9-12 zone; cantilever left and right exposed ; end vertical left 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
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 228 lb uplift at joint 2 and 185 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) 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

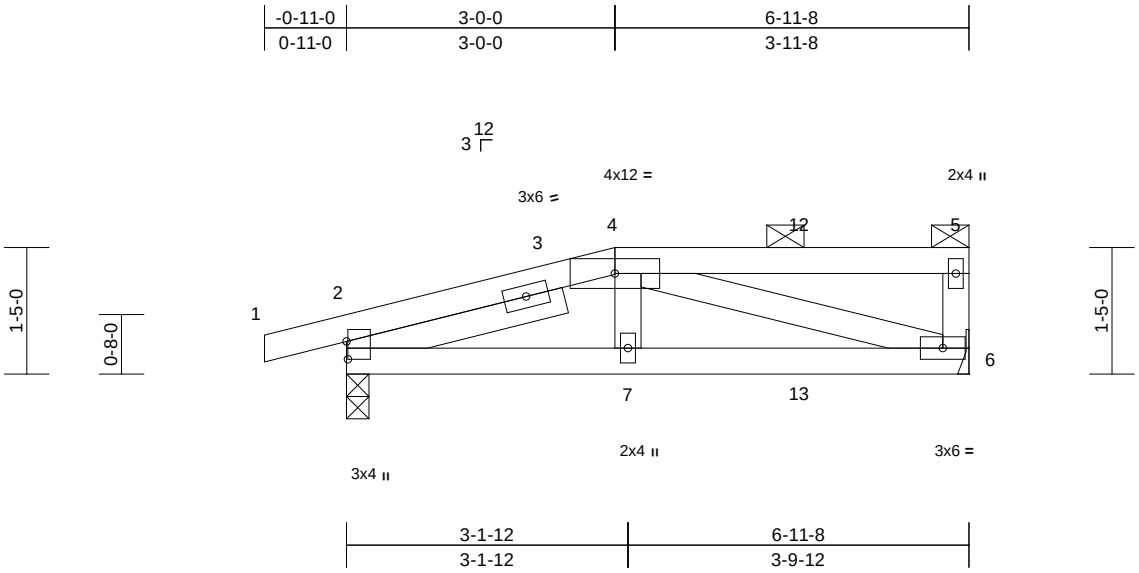
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	E08	Half Hip Girder	1	1	Job Reference (optional)	I63012633

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:58 Page: 1
ID:fThlq03kOSh4ibLS2Udd2IzaQCd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:25.8

Plate Offsets (X, Y): [2:0-2-6,0-0-3]

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	0.23	Vert(LL)	-0.01	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.02	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.12	Horz(CT)	-0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS		Wind(LL)	0.02	6-7	>999	240	Weight: 34 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 8-7-1 oc bracing.

REACTIONS (size) 2=0-3-0, 6= Mechanical
Max Horiz 2=55 (LC 4)
Max Uplift 2=-297 (LC 4), 6=-251 (LC 4)
Max Grav 2=357 (LC 1), 6=306 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-4=-496/465, 4-5=-69/54, 5-6=-127/92
BOT CHORD 2-7=-457/489, 6-7=-467/499
WEBS 4-7=-77/141, 4-6=-449/431

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 297 lb uplift at joint 2 and 251 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 71 lb down and 114 lb up at 3-0-0, and 34 lb down and 38 lb up at 5-0-12 on top chord, and 67 lb down and 104 lb up at 3-0-0, and 18 lb down and 40 lb up at 5-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-5=-60, 6-8=-20
Concentrated Loads (lb)
Vert: 4=-11 (B), 7=-23 (B), 12=-11 (B), 13=-18 (B)

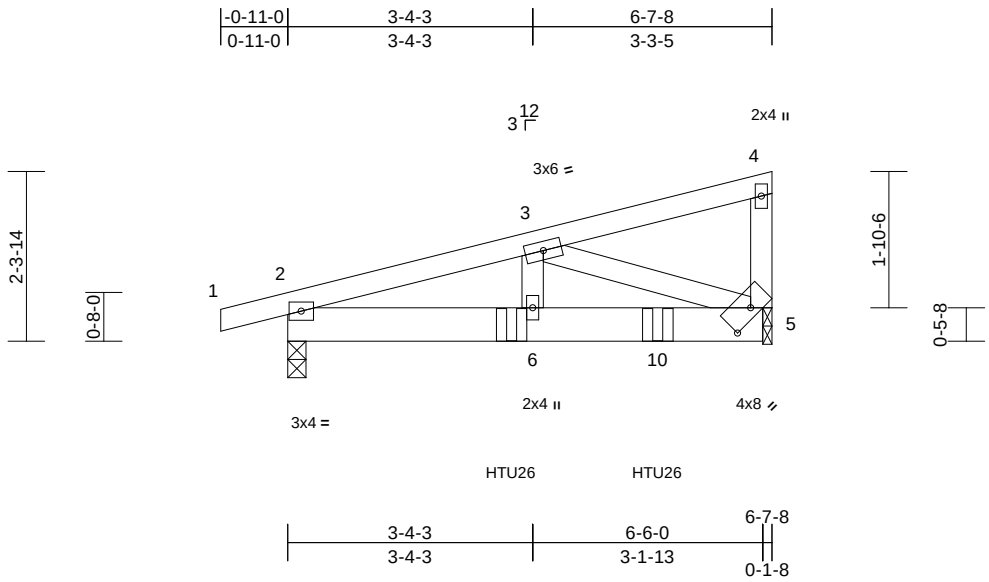
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	E09	Monopitch Girder	1	1	I63012634
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:58 Page: 1
ID:BpBEIISQdbrO9fMoUvjMtFzaQC6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.5

Plate Offsets (X, Y): [5:0-4-7,0-1-7]

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	0.20	Vert(LL)	-0.01	5-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.03	5-6	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.19	Horz(CT)	-0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.03	5-6	>999	240	Weight: 35 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-6-11 oc bracing.

REACTIONS (size) 2=0-3-0, 5=0-1-8
Max Horiz 2=100 (LC 19)
Max Uplift 2=-366 (LC 4), 5=-442 (LC 4)
Max Grav 2=510 (LC 1), 5=598 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-943/649, 3-4=-26/17, 4-5=-87/63
BOT CHORD 2-6=-683/890, 5-6=-683/890
WEBS 3-6=-302/371, 3-5=-946/726

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 5 SP No.2 crushing capacity of 565 psi.
5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 366 lb uplift at joint 2 and 442 lb uplift at joint 5.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Use Simpson Strong-Tie HTU26 (20-16d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 3-0-12 from the left end to 5-0-12 to connect truss(es) to front face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 5-7=-20
Concentrated Loads (lb)
Vert: 6=-286 (F), 10=-249 (F)

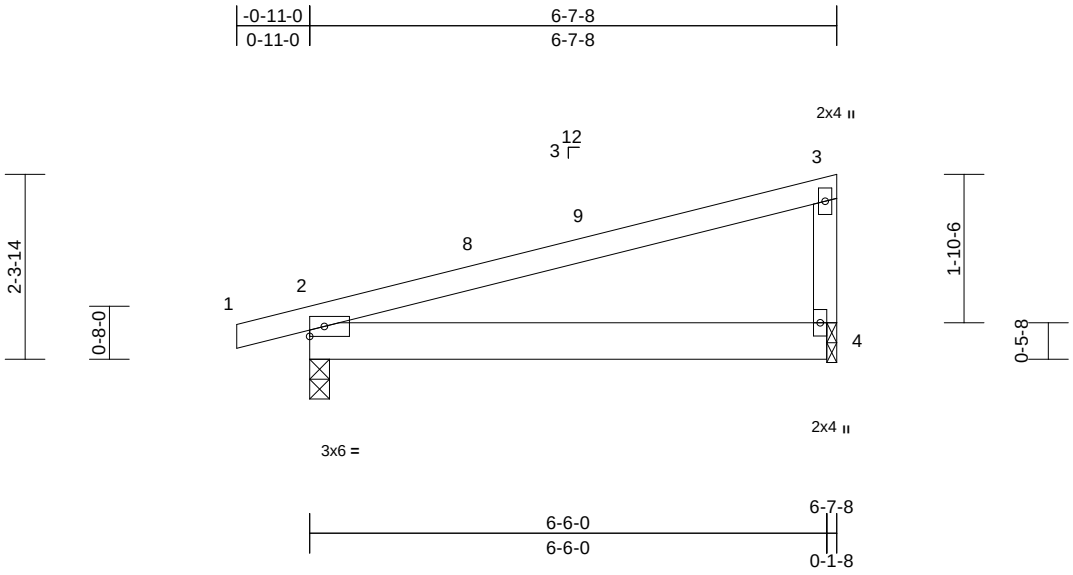
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	E10	Monopitch	3	1	Job Reference (optional)	I63012635

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:59
ID:cT_3faJzvQoKAaIR8JV0FDzaQB?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29

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	0.53	Vert(LL)	-0.03	4-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.07	4-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.04	4-7	>999	240	Weight: 29 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 4=0-1-8
Max Horiz 2=105 (LC 11)
Max Uplift 2=-141 (LC 8), 4=-96 (LC 12)
Max Grav 2=318 (LC 1), 4=255 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-242/225, 3-4=-153/160
BOT CHORD 2-4=-142/126

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-5-12 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 4 SP No.2 crushing capacity of 565 psi.
5) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 4.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 2 and 96 lb uplift at joint 4.
8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

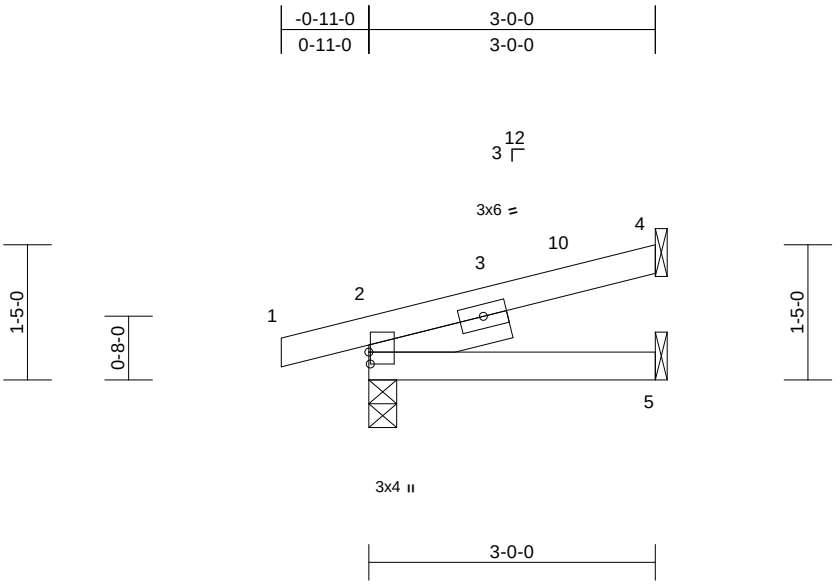
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	E11	Jack-Open	5	1	I63012636
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:59 Page: 1
ID:rKFTVSTRLCHDZy8N9cozVfzaQHG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.1

Plate Offsets (X, Y): [2:0-1-8,0-0-3]

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	0.14	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	5-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 13 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=54 (LC 8)
Max Uplift 2=-128 (LC 8), 4=-53 (LC 8), 5=-27 (LC 8)
Max Grav 2=181 (LC 1), 4=71 (LC 1), 5=49 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-4=-86/159
BOT CHORD 2-5=-110/64

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 2-11-4 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 4, 128 lb uplift at joint 2 and 27 lb uplift at joint 5.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

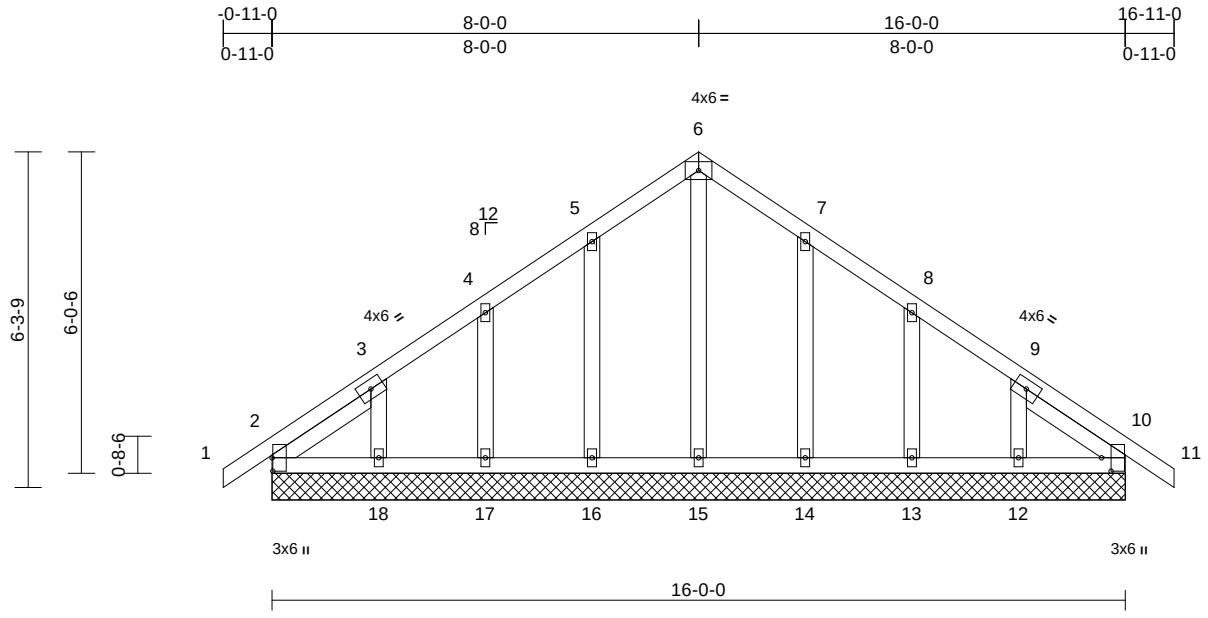
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	G01	Common Supported Gable	1	1	Job Reference (optional)	I63012637

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:56:59
ID:R_zTlhQ2TNGPbZlxzxdMRQzaQ9a-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:43.2

Plate Offsets (X, Y): [2:0-3-0,0-0-3], [10:0-3-0,0-2-3]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 96 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.2 -- 2-3-2, Right 2x4 SP No.2 -- 2-3-2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=16-0-0, 10=16-0-0, 12=16-0-0, 13=16-0-0, 14=16-0-0, 15=16-0-0, 16=16-0-0, 17=16-0-0, 18=16-0-0, 19=16-0-0, 23=16-0-0
Max Horiz 2=198 (LC 11), 19=198 (LC 11)
Max Uplift 2=-56 (LC 8), 10=-8 (LC 9), 12=-131 (LC 13), 13=-101 (LC 13), 14=-106 (LC 13), 16=-107 (LC 12), 17=-99 (LC 12), 18=-140 (LC 12), 19=-56 (LC 8), 23=-8 (LC 9)
Max Grav 2=170 (LC 20), 10=150 (LC 1), 12=191 (LC 20), 13=178 (LC 20), 14=189 (LC 20), 15=170 (LC 22), 16=191 (LC 19), 17=177 (LC 19), 18=201 (LC 19), 19=170 (LC 20), 23=150 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/31, 2-3=-66/34, 3-4=-122/106, 4-5=-105/131, 5-6=-166/182, 6-7=-166/182, 7-8=-98/103, 8-9=-68/40, 9-10=-51/14, 10-11=0/31
BOT CHORD	2-18=-86/144, 17-18=-86/144, 16-17=-86/144, 15-16=-86/144, 14-15=-86/144, 13-14=-86/144, 12-13=-86/144, 10-12=-86/144
WEBS	6-15=-130/54, 5-16=-162/130, 4-17=-160/127, 3-18=-180/150, 7-14=-162/129, 8-13=-160/128, 9-12=-182/142

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-0-0, Exterior (2) 2-0-0 to 8-0-0, Corner (3) 8-0-0 to 11-0-0, Exterior (2) 11-0-0 to 16-11-0 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) 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 2, 8 lb uplift at joint 10, 107 lb uplift at joint 16, 99 lb uplift at joint 17, 140 lb uplift at joint 18, 106 lb uplift at joint 14, 101 lb uplift at joint 13, 131 lb uplift at joint 12, 56 lb uplift at joint 2 and 8 lb uplift at joint 10.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

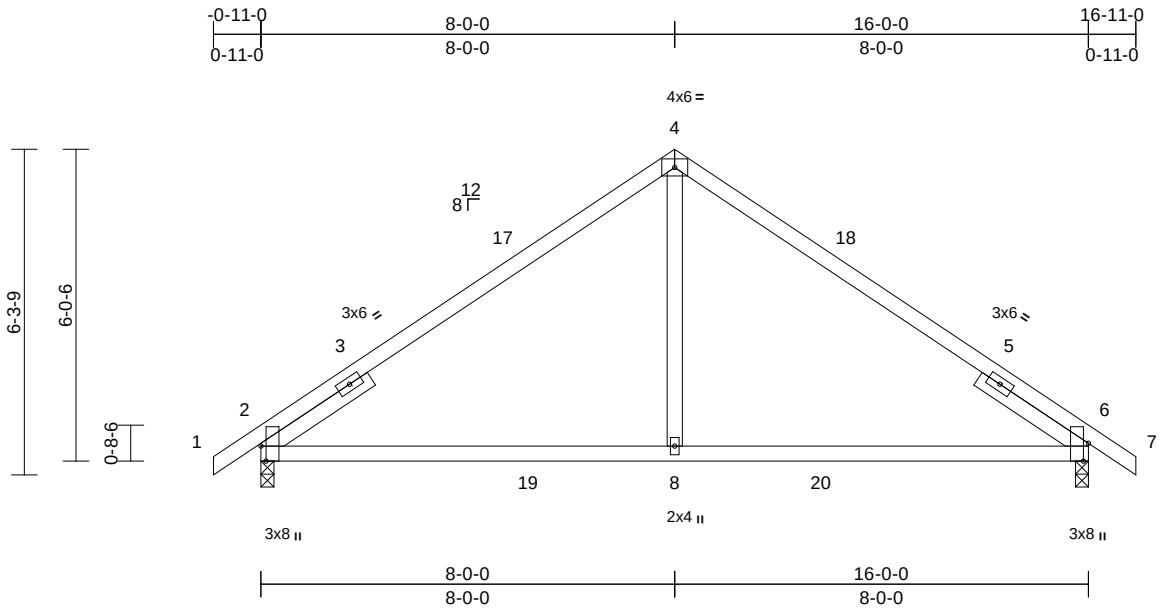
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012638
3822905	G02	Common	2	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:00
ID:4le98A9FfcUXyA3ihJEBYnzaQ9w-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.5

Plate Offsets (X, Y): [2:0-3-8,Edge], [6:0-4-2,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	0.84	Vert(LL)	0.24	8-11	>815	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.21	8-15	>902	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.34	Horz(CT)	-0.05	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 72 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.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 7-5-0 oc bracing.

REACTIONS (size) 2=0-3-0, 6=0-3-0
Max Horiz 2=198 (LC 11)
Max Uplift 2=-188 (LC 12), 6=-188 (LC 13)
Max Grav 2=695 (LC 1), 6=695 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/31, 2-4=-675/759, 4-6=-675/759, 6-7=0/31
BOT CHORD	2-8=-463/595, 6-8=-463/561
WEBS	4-8=-543/391

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 8-0-0, Exterior (2) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 16-11-0 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
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 2 and 188 lb uplift at joint 6.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

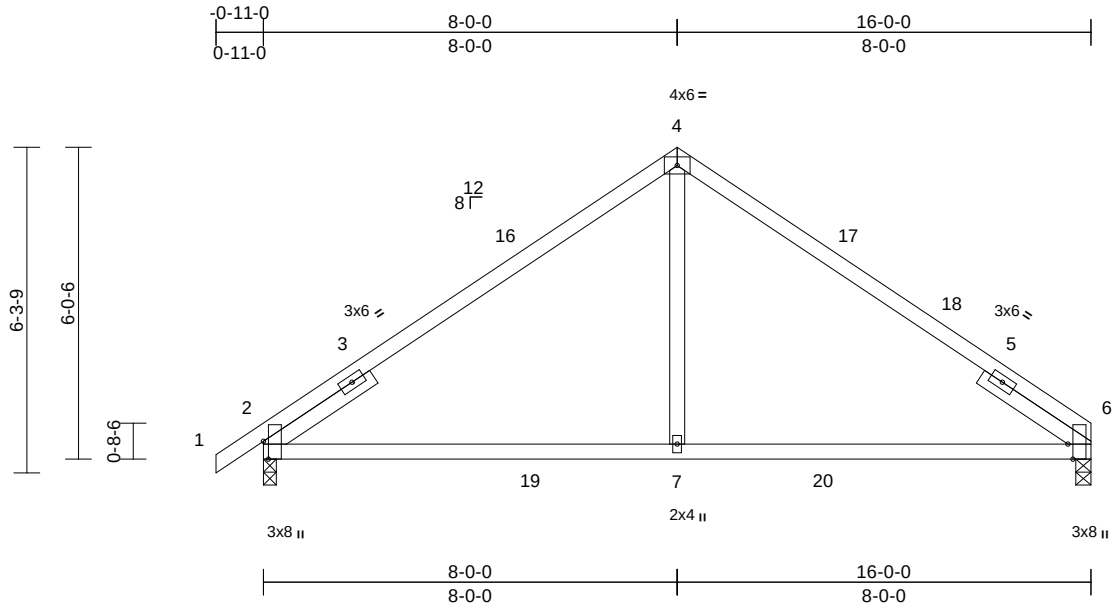
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012639
3822905	G03	Common	3	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:00 Page: 1
ID:JUhZ1EGuXNdFXZFRiiuIQgzaQ9n-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:44.5

Plate Offsets (X, Y): [2:0-4-2,Edge], [6:0-3-8,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	0.85	Vert(LL)	0.24	7-10	>811	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.22	7-10	>869	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.34	Horz(CT)	-0.05	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 70 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.2 -- 2-6-0, Right 2x4 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 7-2-2 oc bracing.

REACTIONS (size) 2=0-3-0, 6=0-3-8
Max Horiz 2=191 (LC 9)
Max Uplift 2=-188 (LC 12), 6=-157 (LC 13)
Max Grav 2=697 (LC 1), 6=644 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/31, 2-4=-678/760, 4-6=-714/764
BOT CHORD	2-7=-491/587, 6-7=-491/564
WEBS	4-7=-547/392

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 8-0-0, Exterior (2) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 16-0-0 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
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 6 and 188 lb uplift at joint 2.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

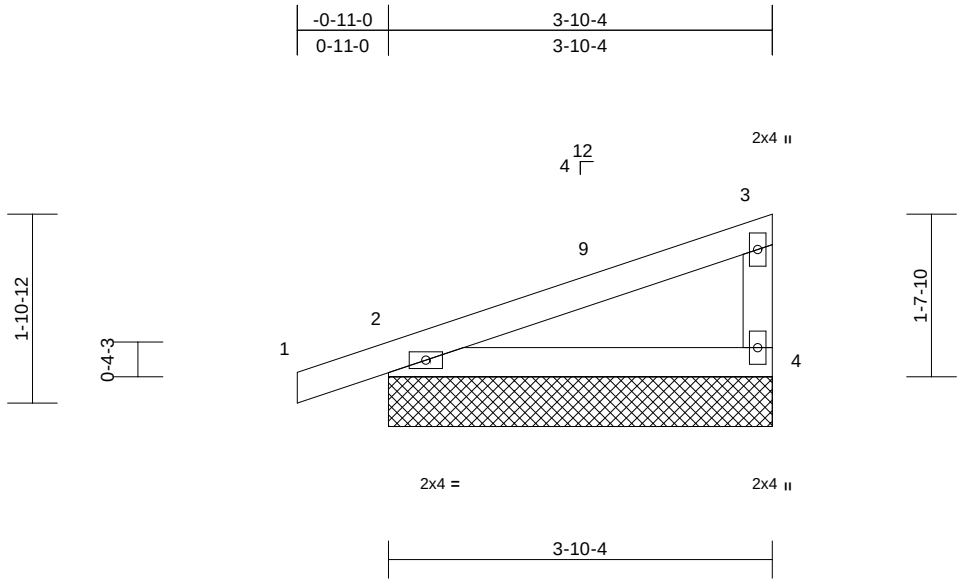
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012640
3822905	H01	Monopitch Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:00 Page: 1
ID:kbQYoui5plH?TFaYNz3_QUzaQ9C-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23.1

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 15 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=3-10-4, 4=3-10-4, 5=3-10-4
Max Horiz 2=86 (LC 8), 5=86 (LC 8)
Max Uplift 2=-100 (LC 8), 4=-58 (LC 12), 5=-100 (LC 8)
Max Grav 2=210 (LC 1), 4=145 (LC 1), 5=210 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-62/25, 3-4=-93/165
BOT CHORD 2-4=-75/73

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 3-8-8 zone; cantilever left and right exposed ; end vertical left 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) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 2, 58 lb uplift at joint 4 and 100 lb uplift at joint 2.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

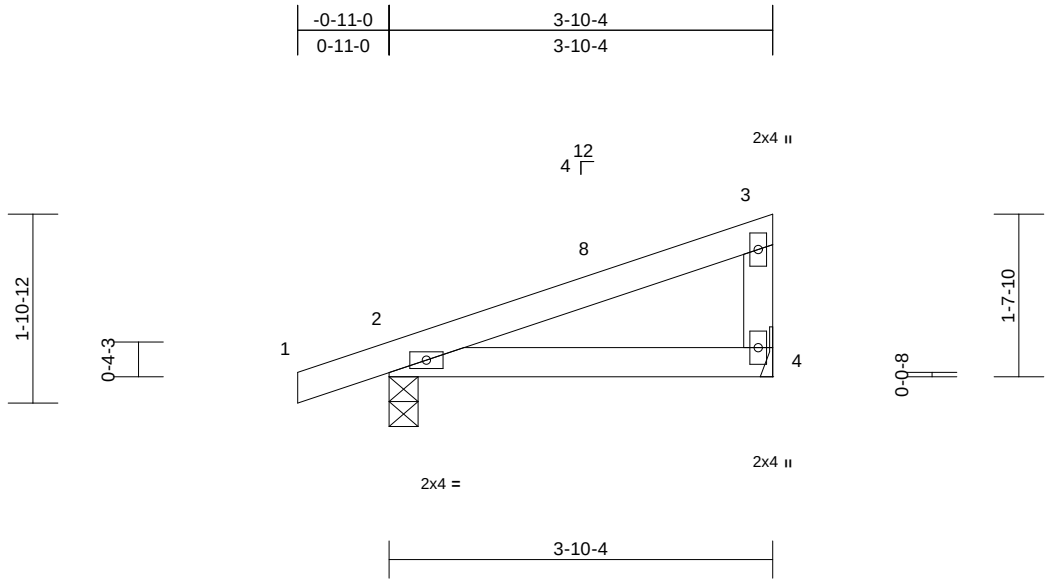
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	H02	Monopitch	5	1	Job Reference (optional)	I63012641

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:00
ID:VPR?1R0nxRRSz5?LLj?rwlzaQ8p-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23.1

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	0.17	Vert(LL)	-0.01	4-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.01	4-7	>999	240	Weight: 15 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 4= Mechanical
Max Horiz 2=86 (LC 8)
Max Uplift 2=-100 (LC 8), 4=-60 (LC 12)
Max Grav 2=210 (LC 1), 4=142 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-62/25, 3-4=-93/105
BOT CHORD 2-4=-49/73

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-8-8 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 4 and 100 lb uplift at joint 2.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

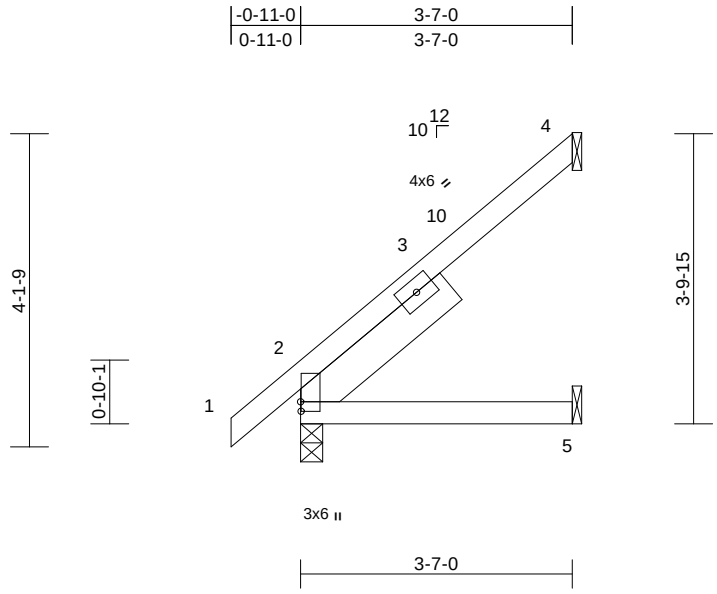
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove I63012642
3822905	JA1	Jack-Open	16	1	Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:01 Page: 1
ID:J0H4uHmDvTAn2M1NBo0iYUzahEh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.4

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

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	0.25	Vert(LL)	0.02	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	5-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 20 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=187 (LC 12)
Max Uplift 4=-118 (LC 12), 5=-14 (LC 12)
Max Grav 2=203 (LC 1), 4=113 (LC 19), 5=62 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-4=-184/98
BOT CHORD 2-5=-162/150

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-6-4 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 4 and 14 lb uplift at joint 5.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

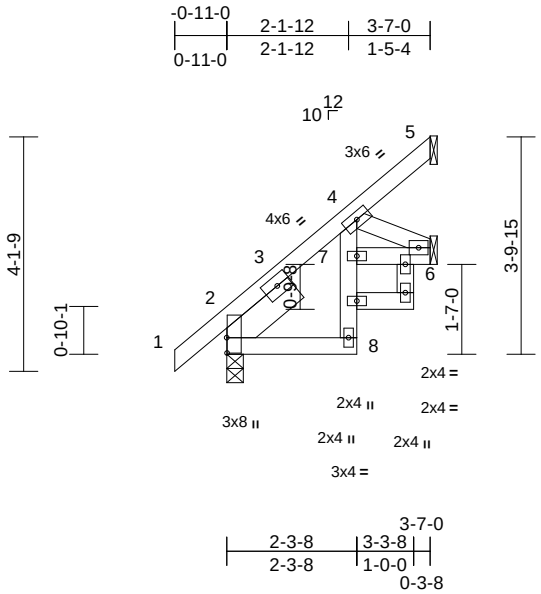
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	JA2	Jack-Open	4	1	I63012643
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:01 Page: 1
ID:J0H4uHmDvTAn2M1NBo0iYUzahEh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:40.6

Plate Offsets (X, Y): [2:0-3-4,0-0-1]

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	0.08	Vert(LL)	0.01	8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.01	8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	-0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 25 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
10-0-0 oc bracing: 7-8

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=187 (LC 12)
Max Uplift 5=-56 (LC 12), 6=-75 (LC 12)
Max Grav 2=204 (LC 1), 5=62 (LC 19), 6=102 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-4=-94/18, 4-5=-50/48
BOT CHORD 2-8=-137/148, 7-8=-20/50, 4-7=-12/66, 6-7=-190/266
WEBS 4-6=-296/212

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-12, Interior (1) 2-1-12 to 3-6-4 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 5 and 75 lb uplift at joint 6.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

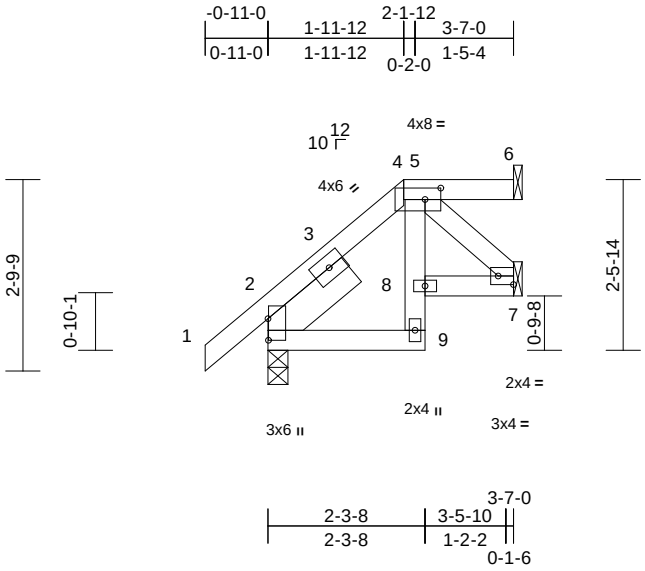
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	I63012644
3822905	JA3	Jack-Open Girder	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:01
ID:gKj6n2sgj7V?rBwgThdpCSzahDH-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:33.6

Plate Offsets (X, Y): [2:0-3-12,0-0-1], [4:0-2-12,0-2-0], [7: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	0.07	Vert(LL)	0.01	9	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	0.00	9	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.04	Horz(CT)	-0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 23 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
SLIDER	Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-7-0 oc purlins, except 2-0-0 oc purlins: 4-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6= Mechanical, 7= Mechanical
Max Horiz 2=122 (LC 8)
Max Uplift 2=-111 (LC 8), 6=-38 (LC 23), 7=-140 (LC 8)
Max Grav 2=236 (LC 15), 6=42 (LC 20), 7=155 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/35, 2-4=-147/116, 4-5=-92/97, 5-6=0/0
BOT CHORD	2-9=-113/92, 8-9=-37/50, 5-8=-28/64, 7-8=-152/143
WEBS	5-7=-201/213

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 6, 111 lb uplift at joint 2 and 140 lb uplift at joint 7.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 187 lb down and 160 lb up at 1-11-12 on top chord, and 37 lb down and 32 lb up at 2-1-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-6=-60, 9-10=-20, 7-8=-20
Concentrated Loads (lb)
Vert: 4=-8 (F), 9=-9 (F)

January 12,2024

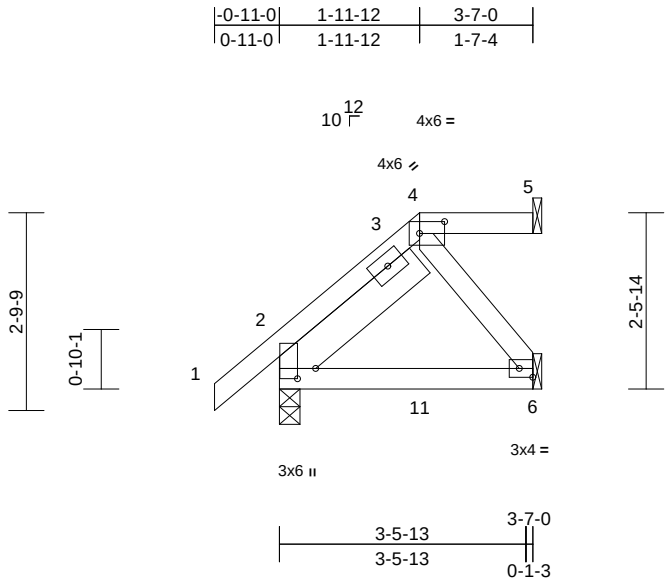
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	JA4	Jack-Open Girder	3	1	Job Reference (optional)	I63012645

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:02
ID:gKj6n2sgj7V?rBwgThdpCSzahDH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:32.6

Plate Offsets (X, Y): [2:0-1-12,0-3-1], [4:0-4-4,0-2-0], [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	0.07	Vert(LL)	0.00	6-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.01	6-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP		Wind(LL)	0.01	6-9	>999	240	Weight: 23 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
SLIDER	Left 2x6 SP No.2 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-7-0 oc purlins, except 2-0-0 oc purlins: 4-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=122 (LC 8)
Max Uplift 2=-112 (LC 8), 5=-31 (LC 4), 6=-126 (LC 8)
Max Grav 2=237 (LC 15), 5=46 (LC 1), 6=145 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/35, 2-4=-190/133, 4-5=0/0
BOT CHORD	2-6=-92/79
WEBS	4-6=-135/157

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * 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.
6) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 5, 112 lb uplift at joint 2 and 126 lb uplift at joint 6.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 187 lb down and 160 lb up at 1-11-12 on top chord, and 37 lb down and 32 lb up at 1-11-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-5=-60, 6-7=-20
Concentrated Loads (lb)
Vert: 4=-8 (F), 11=-9 (F)

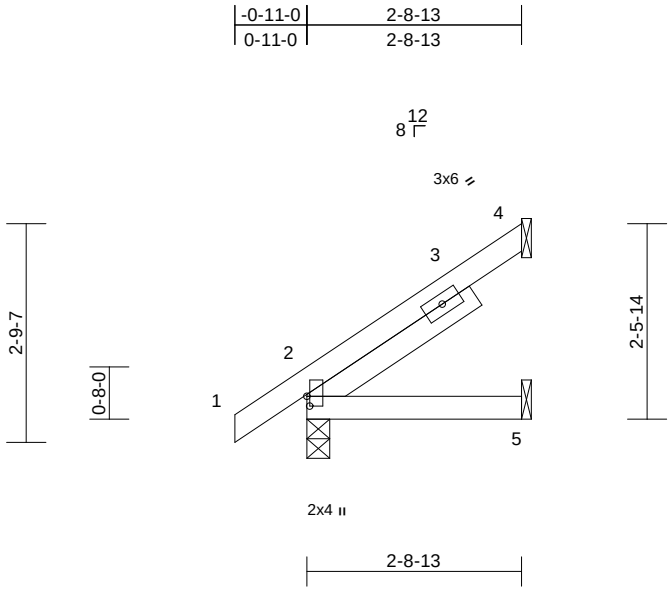
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	JB1	Jack-Open	4	1	Job Reference (optional)	I63012646

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:02
ID:C320IS1Ozwpo3a8PwiudvvzahEM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.4

Plate Offsets (X, Y): [2:0-1-8,0-0-7]

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	0.11	Vert(LL)	0.00	5-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	5-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 15 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=120 (LC 12)
Max Uplift 2=-29 (LC 12), 4=-74 (LC 12), 5=-2 (LC 12)
Max Grav 2=171 (LC 1), 4=82 (LC 19), 5=44 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-4=-166/60
BOT CHORD 2-5=-74/83

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 2-8-1 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * 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.
4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 74 lb uplift at joint 4, 29 lb uplift at joint 2 and 2 lb uplift at joint 5.
7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

January 12,2024

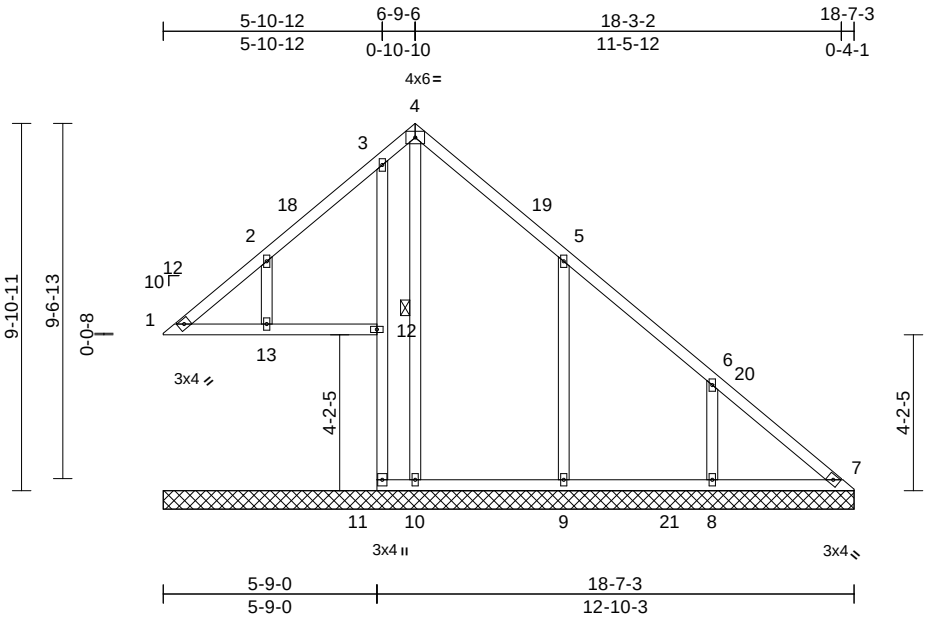
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	V01	Valley	1	1	I63012647 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:02
ID:6wJELaN0YeDtlwuJbCTHXjzahHn-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:62

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
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.28	Horiz(TL)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 104 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-10

REACTIONS (size) 1=18-7-3, 7=18-7-3, 8=18-7-3, 9=18-7-3, 10=18-7-3, 11=18-7-3, 12=18-7-3, 13=18-7-3
Max Horiz 1=-335 (LC 13)
Max Uplift 1=-273 (LC 13), 7=-78 (LC 13), 8=-267 (LC 13), 9=-265 (LC 13), 10=-63 (LC 11), 11=-67 (LC 18), 12=-100 (LC 12), 13=-217 (LC 12)
Max Grav 1=211 (LC 11), 7=118 (LC 20), 8=412 (LC 20), 9=521 (LC 20), 10=587 (LC 13), 11=13 (LC 13), 12=201 (LC 19), 13=300 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-310/463, 2-3=-424/576, 3-4=-447/569, 4-5=-446/547, 5-6=-255/310, 6-7=-77/104
BOT CHORD 1-13=-50/106, 12-13=-7/10, 11-12=0/0, 3-12=-177/117, 10-11=-8/9, 9-10=-8/9, 8-9=-8/9, 7-8=-39/65
WEBS 4-10=-569/377, 2-13=-294/239, 5-9=-378/321, 6-8=-345/290

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-10 to 2-10-0, Interior (1) 2-10-0 to 6-10-0, Exterior (2) 6-10-0 to 9-10-0, Interior (1) 9-10-0 to 18-3-9 zone; cantilever left and right exposed ; end vertical 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 273 lb uplift at joint 1, 78 lb uplift at joint 7, 100 lb uplift at joint 12, 67 lb uplift at joint 11, 63 lb uplift at joint 10, 217 lb uplift at joint 13, 265 lb uplift at joint 9 and 267 lb uplift at joint 8.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 13.
13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

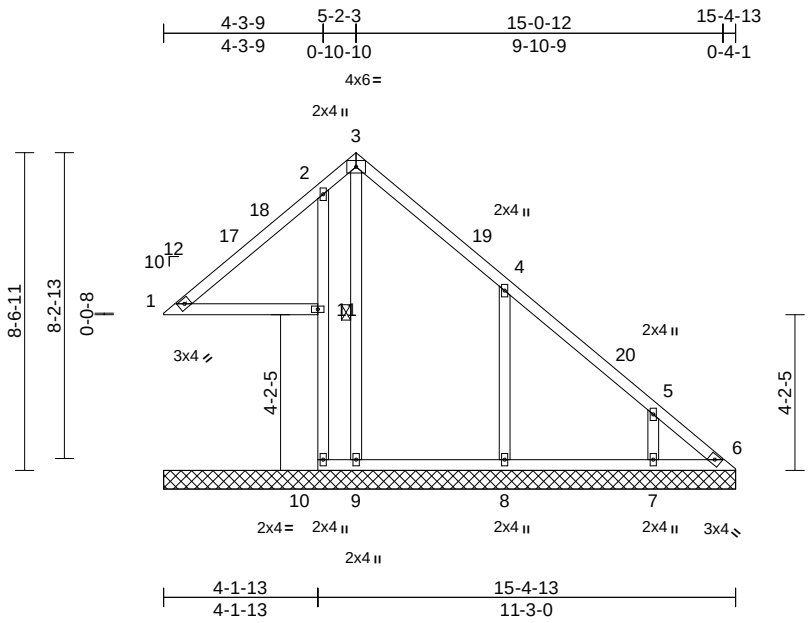
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	V02	Valley	1	1	I63012648 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:02 Page: 1
ID:mVZBQUjDjYtlGOcunoU4CrzahHK-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:62

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
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 83 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 3-9

REACTIONS (size) 1=15-4-13, 6=15-4-13, 7=15-4-13, 8=15-4-13, 9=15-4-13, 10=15-4-13, 11=15-4-13, 16=15-4-13
Max Horiz 1=-305 (LC 13)
Max Uplift 1=-278 (LC 13), 6=-1 (LC 20), 7=-239 (LC 13), 8=-268 (LC 13), 9=-24 (LC 11), 10=-91 (LC 18), 11=-209 (LC 12), 16=-1 (LC 20)
Max Grav 1=215 (LC 20), 6=0 (LC 13), 7=348 (LC 20), 8=452 (LC 20), 9=524 (LC 22), 10=17 (LC 13), 11=324 (LC 19), 16=0 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-403/470, 2-3=-414/500, 3-4=-366/454, 4-5=-170/215, 5-6=-12/75
BOT CHORD 1-11=-93/163, 10-11=0/0, 2-11=-258/198, 9-10=-19/12, 8-9=-19/12, 7-8=-19/12, 6-7=-19/12
WEBS 3-9=-489/348, 4-8=-385/326, 5-7=-318/267

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-10 to 3-0-10, Interior (1) 3-0-10 to 5-2-13, Exterior (2) 5-2-13 to 8-2-13, Interior (1) 8-2-13 to 15-1-3 zone; cantilever left and right exposed ; end vertical 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 278 lb uplift at joint 1, 1 lb uplift at joint 6, 209 lb uplift at joint 11, 91 lb uplift at joint 10, 24 lb uplift at joint 9, 268 lb uplift at joint 8, 239 lb uplift at joint 7 and 1 lb uplift at joint 6.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 16.
13) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

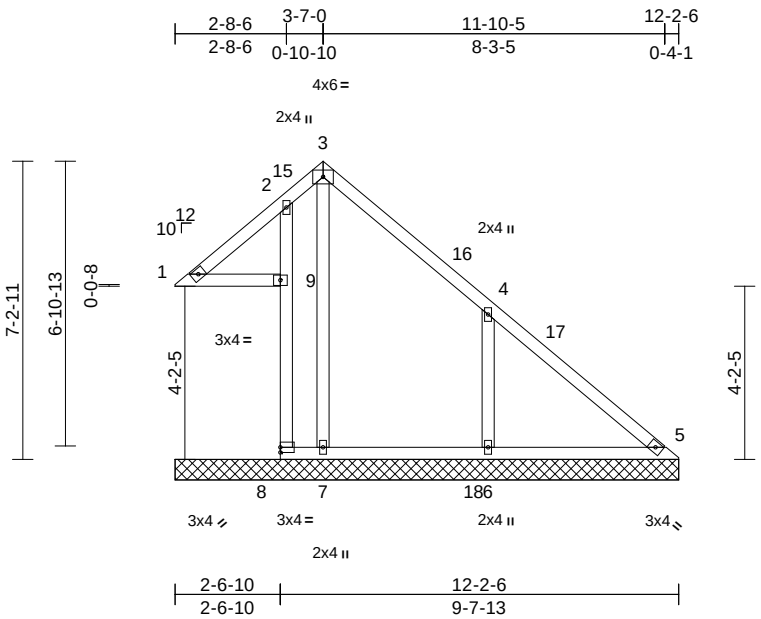
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove
3822905	V03	Valley	1	1	I63012649
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:03 Page: 1
ID:EVjrLGMqTWQNVNbuqjQGJozahGW-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:55.8

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	0.49	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.28	Horiz(TL)	-0.30	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 64 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 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 8-9.

REACTIONS (size) 1=12-2-6, 5=12-2-6, 6=12-2-6, 7=12-2-6, 8=12-2-6, 9=12-2-6, 14=12-2-6
Max Horiz 1=-275 (LC 13)
Max Uplift 1=-134 (LC 13), 5=-5 (LC 20), 6=-434 (LC 13), 8=-171 (LC 20), 9=-137 (LC 12), 14=-5 (LC 20)
Max Grav 1=30 (LC 23), 5=4 (LC 13), 6=682 (LC 20), 7=503 (LC 22), 8=73 (LC 13), 9=246 (LC 19), 14=4 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-48/306, 2-3=-214/341, 3-4=-205/308, 4-5=-141/216
BOT CHORD 1-9=-219/136, 8-9=0/0, 2-9=-198/121, 7-8=-117/69, 6-7=-117/69, 5-6=-117/69
WEBS 3-7=-317/139, 4-6=-506/389

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-10 to 3-0-10, Interior (1) 3-0-10 to 3-7-10, Exterior (2) 3-7-10 to 6-7-10, Interior (1) 6-7-10 to 11-10-12 zone; cantilever left and right exposed ; end vertical 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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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 crushing capacity of 565 psi.
9) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 1, 5 lb uplift at joint 5, 137 lb uplift at joint 9, 171 lb uplift at joint 8, 434 lb uplift at joint 6 and 5 lb uplift at joint 5.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 14.
12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

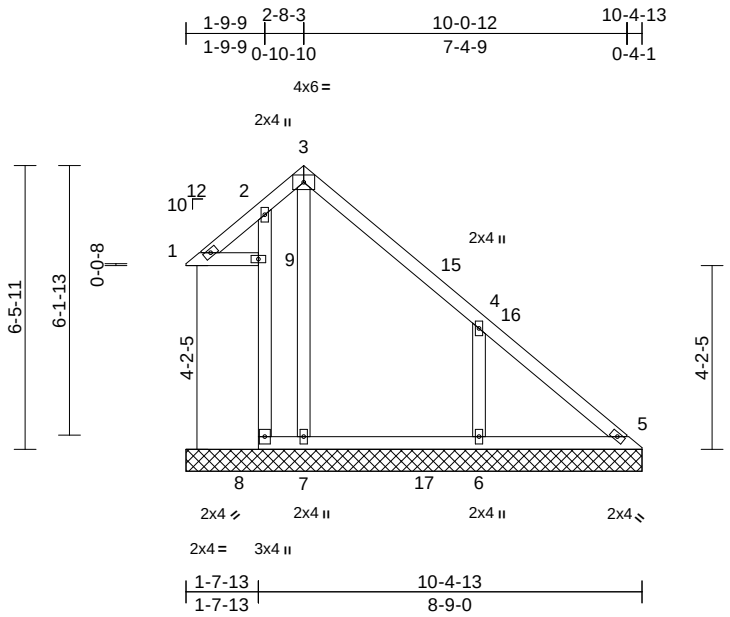
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove	
3822905	V04	Valley	1	1	Job Reference (optional)	I63012650

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:03 Page: 1
ID:M??m3jW_PW3XZN4O5y9JKYzahGJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:52.6

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	-0.15	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 54 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 8-9.

REACTIONS (size) 1=10-4-13, 5=10-4-13, 6=10-4-13, 7=10-4-13, 8=10-4-13, 9=10-4-13, 14=10-4-13
Max Horiz 1=-258 (LC 13)
Max Uplift 1=-142 (LC 13), 5=-5 (LC 20), 6=-376 (LC 13), 8=-99 (LC 20), 9=-83 (LC 12), 14=-5 (LC 20)
Max Grav 1=41 (LC 11), 5=4 (LC 13), 6=575 (LC 20), 7=448 (LC 22), 8=24 (LC 13), 9=163 (LC 19), 14=4 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-96/270, 2-3=-215/315, 3-4=-222/288, 4-5=-56/151
BOT CHORD 1-9=-158/107, 8-9=0/0, 2-9=-115/52, 7-8=-64/40, 6-7=-64/40, 5-6=-64/40
WEBS 3-7=-279/109, 4-6=-453/349

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-10 to 5-8-13, Interior (1) 5-8-13 to 10-1-3 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
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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 crushing capacity of 565 psi.
9) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 142 lb uplift at joint 1, 5 lb uplift at joint 5, 83 lb uplift at joint 9, 99 lb uplift at joint 8, 376 lb uplift at joint 6 and 5 lb uplift at joint 5.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 14.
12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

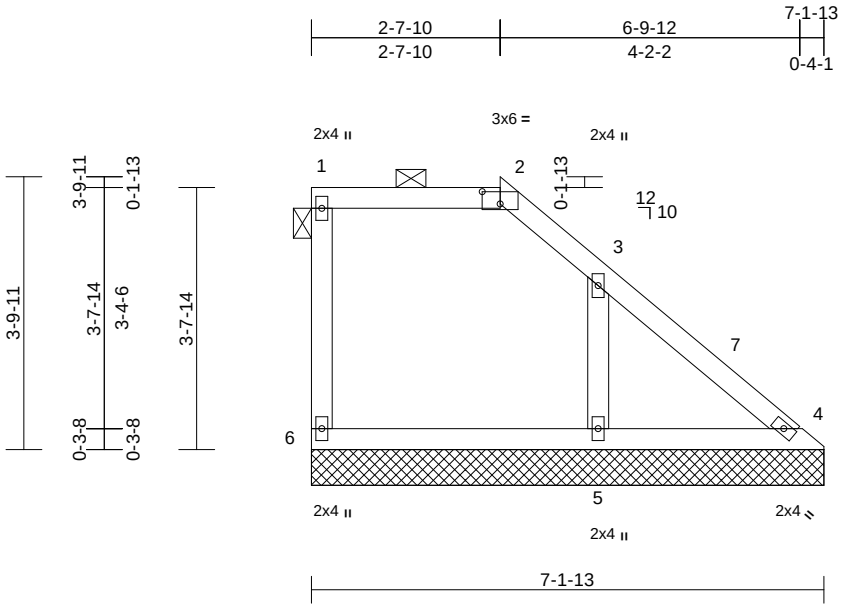
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove I63012651
3822905	V05	Valley	1	1	Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:03 Page: 1
ID:0sn9jR3rafs?4RbDocz6CFzahFb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.1

Plate Offsets (X, Y): [2:0-3-0,0-2-1]

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 30 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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4=7-1-13, 5=7-1-13, 6=7-1-13
Max Horiz 6=-171 (LC 8)
Max Uplift 4=-18 (LC 9), 5=-162 (LC 13), 6=-57 (LC 8)
Max Grav 4=125 (LC 19), 5=327 (LC 20), 6=136 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-100/115, 1-2=-86/93, 2-3=-109/114, 3-4=-240/228
BOT CHORD 5-6=-195/217, 4-5=-195/217
WEBS 3-5=-354/333

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-12 to 5-7-10, Interior (1) 5-7-10 to 6-9-7 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
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) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 6, 18 lb uplift at joint 4 and 162 lb uplift at joint 5.
11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) 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

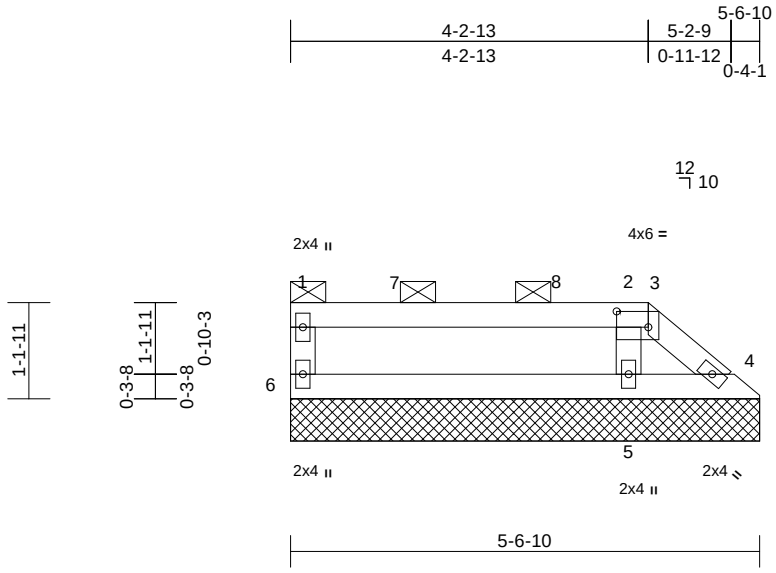
January 12,2024

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

Job	Truss	Truss Type	Qty	Ply	Furr, Meadows, 1 Shady Grove I63012652
3822905	V06	Valley	1	1	Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Fri Jan 12 10:57:04 Page: 1
ID:uuY57dK0d5V16giGWWs1YgzahFG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.3

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

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							Weight: 18 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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-3 oc purlins, except end verticals, and 2-0-0 oc purlins: 1-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4=5-6-10, 5=5-6-10, 6=5-6-10
Max Horiz 6=-43 (LC 8)
Max Uplift 4=-6 (LC 13), 5=-90 (LC 8), 6=-51 (LC 9)
Max Grav 4=25 (LC 10), 5=250 (LC 1), 6=143 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-108/194, 1-2=-59/81, 2-3=-59/81, 3-4=-57/25
BOT CHORD 5-6=-32/57, 4-5=-32/57
WEBS 2-5=-182/326

NOTES
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) 0-1-12 to 3-1-12, Exterior (2) 3-1-12 to 4-2-13, Corner (3) 4-2-13 to 5-2-4 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
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) Provide adequate drainage to prevent water ponding.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 6, 6 lb uplift at joint 4 and 90 lb uplift at joint 5.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

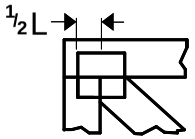
LOAD CASE(S) Standard

January 12,2024

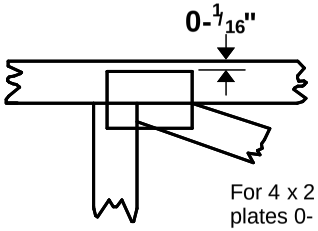
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

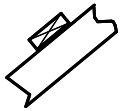
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

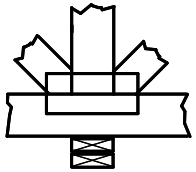
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

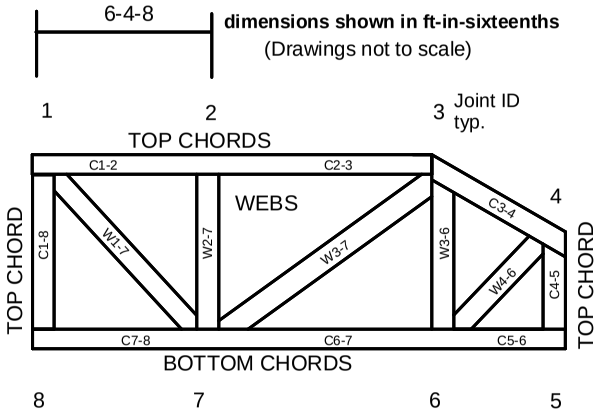


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: 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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 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/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.