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: 4111091 - 4955 Ray Rd Spring Lake, NC

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Project Customer: Carolina Construction Project Name:
Lot/Block: 4955 Subdivision: RAY ROAD
Address: 4955 RAY ROAD
City: SPRING LAKE 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: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 11 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date
1	I66886959	4111091	A01	7/16/24
2	I66886960	4111091	A02	7/16/24
3	I66886961	4111091	A03	7/16/24
4	I66886962	4111091	A04	7/16/24
5	I66886963	4111091		7/16/24
6	I66886964	4111091	A06	7/16/24
7	I66886965	4111091	A07	7/16/24
8	I66886966	4111091	A08	7/16/24
9	I66886967	4111091	G01	7/16/24
10	I66886968	4111091	G02	7/16/24
11	I66886969	4111091	G03	7/16/24

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.

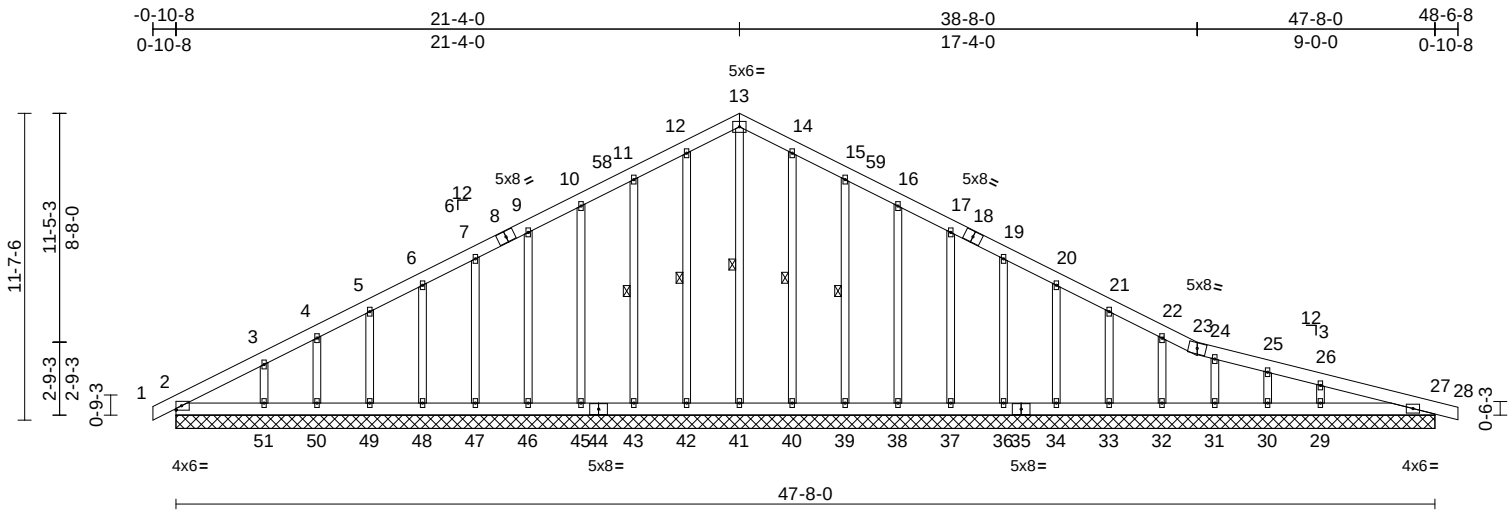
Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina is December 31, 2024.

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.

July 16,2024
Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	A01	Roof Special Supported Gable	1	1	I66886959 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:39 Page: 1
ID:TJ6?gbzDTeF8T4i_dWUP?Ez7OKU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:87.2

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	27	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 407 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 13-41, 12-42, 11-43, 14-40, 15-39

REACTIONS (size) 2=47-8-0, 27=47-8-0, 29=47-8-0, 30=47-8-0, 31=47-8-0, 32=47-8-0, 33=47-8-0, 34=47-8-0, 36=47-8-0, 37=47-8-0, 38=47-8-0, 39=47-8-0, 40=47-8-0, 41=47-8-0, 42=47-8-0, 43=47-8-0, 45=47-8-0, 46=47-8-0, 47=47-8-0, 48=47-8-0, 49=47-8-0, 50=47-8-0, 51=47-8-0, 52=47-8-0, 55=47-8-0
Max Horiz 2=-252 (LC 13), 52=-252 (LC 13)
Max Uplift 2=-47 (LC 13), 27=-93 (LC 9), 29=-133 (LC 13), 30=-39 (LC 9), 31=-60 (LC 9), 32=-70 (LC 13), 33=-84 (LC 13), 34=-82 (LC 13), 36=-82 (LC 13), 37=-82 (LC 13), 38=-84 (LC 13), 39=-97 (LC 13), 40=-30 (LC 13), 42=-44 (LC 12), 43=-94 (LC 12), 45=-83 (LC 12), 46=-82 (LC 12), 47=-83 (LC 12), 48=-81 (LC 12), 49=-89 (LC 12), 50=-47 (LC 12), 51=-180 (LC 12), 52=-47 (LC 13), 55=-93 (LC 9)
Max Grav 2=189 (LC 21), 27=207 (LC 1), 29=337 (LC 26), 30=85 (LC 26), 31=182 (LC 1), 32=158 (LC 1), 33=160 (LC 26), 34=160 (LC 1), 36=160 (LC 26), 37=160 (LC 1), 38=160 (LC 1), 39=162 (LC 26), 40=160 (LC 26), 41=215 (LC 13), 42=160 (LC 25), 43=162 (LC 25), 45=160 (LC 1), 46=160 (LC 1), 47=160 (LC 25), 48=159 (LC 1), 49=167 (LC 25), 50=128 (LC 1), 51=253 (LC 25), 52=189 (LC 21), 55=207 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-300/119, 3-4=-211/129, 4-5=-165/147, 5-6=-123/178, 6-7=-89/211, 7-9=-82/244, 9-10=-105/277, 10-11=-127/333, 11-12=-153/394, 12-13=-163/422, 13-14=-163/405, 14-15=-153/361, 15-16=-127/301, 16-17=-105/245, 17-19=-82/191, 19-20=-60/136, 20-21=-48/89, 21-22=-73/72, 22-23=-105/68, 23-24=-109/57, 24-25=-133/47, 25-26=-156/38, 26-27=-195/66, 27-28=0/13
BOT CHORD 2-51=-119/231, 50-51=-65/231, 49-50=-65/231, 48-49=-65/231, 47-48=-65/231, 46-47=-65/231, 45-46=-65/231, 43-45=-65/231, 42-43=-65/231, 41-42=-65/231, 40-41=-65/231, 39-40=-65/231, 38-39=-65/231, 37-38=-65/231, 36-37=-65/231, 34-36=-65/231, 33-34=-65/231, 32-33=-65/231, 31-32=-65/231, 30-31=-65/231, 29-30=-65/231, 27-29=-65/231
WEBS 13-41=-191/35, 12-42=-120/128, 11-43=-122/181, 10-45=-120/109, 9-46=-120/106, 7-47=-120/106, 6-48=-120/106, 5-49=-122/109, 4-50=-104/87, 3-51=-174/169, 14-40=-120/123, 15-39=-122/183, 16-38=-120/109, 17-37=-120/106, 19-36=-120/106, 20-34=-120/106, 21-33=-120/108, 22-32=-121/94, 24-31=-131/81, 25-30=-83/74, 26-29=-214/132

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(3E) -0-10-8 to 3-10-11, Exterior (2N) 3-10-11 to 21-4-0, Corner(3R) 21-4-0 to 26-1-3, Exterior(2N) 26-1-3 to 48-6-8 zone; 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

July 16,2024

Continued on page 2

ENGINEERING BY TRENCO A MiTek Affiliate
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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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 2, 93 lb uplift at joint 27, 44 lb uplift at joint 42, 94 lb uplift at joint 43, 83 lb uplift at joint 45, 82 lb uplift at joint 46, 83 lb uplift at joint 47, 81 lb uplift at joint 48, 89 lb uplift at joint 49, 47 lb uplift at joint 50, 180 lb uplift at joint 51, 30 lb uplift at joint 40, 97 lb uplift at joint 39, 84 lb uplift at joint 38, 82 lb uplift at joint 37, 82 lb uplift at joint 36, 82 lb uplift at joint 34, 84 lb uplift at joint 33, 70 lb uplift at joint 32, 60 lb uplift at joint 31, 39 lb uplift at joint 30, 133 lb uplift at joint 29, 47 lb uplift at joint 2 and 93 lb uplift at joint 27.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	A02	Roof Special	5	1	I66886960 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:40 Page: 1
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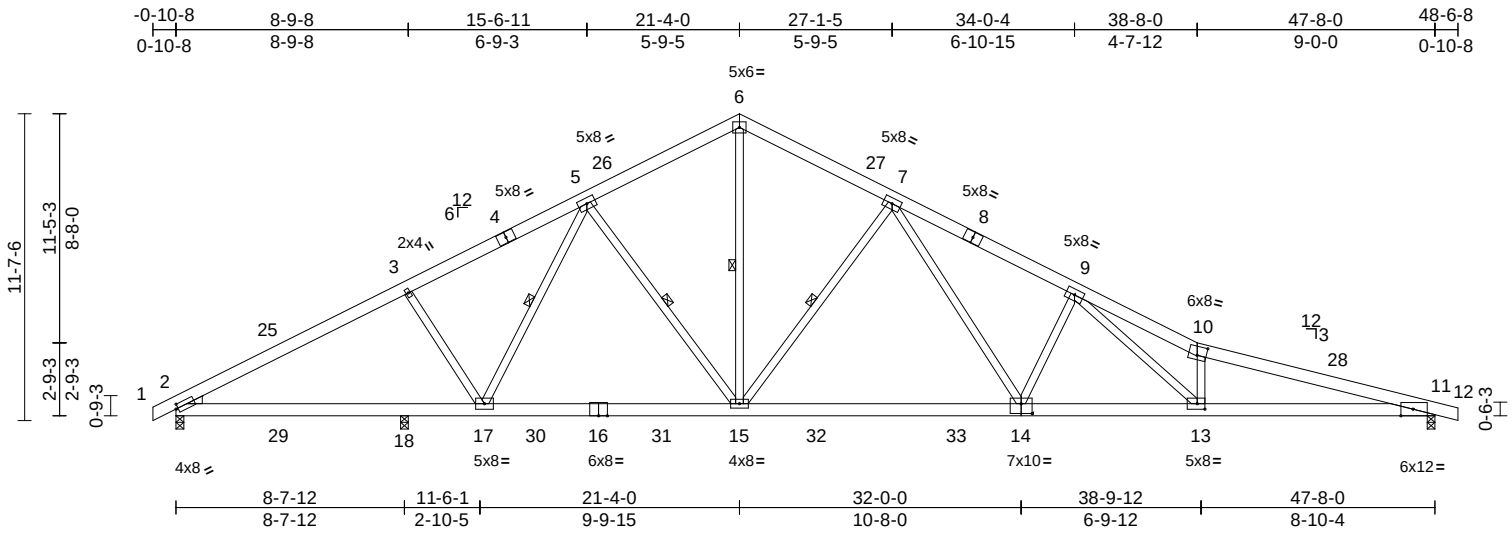

Scale = 1:87.2

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [10:0-4-0,0-4-0], [11:0-5-8,Edge], [13:0-3-8,0-2-8], [14:0-5-0,0-4-8]

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	0.70	Vert(LL)	-0.39	13-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.71	13-14	>664	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.11	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.37	13-14	>999	240	Weight: 337 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS
WEBS 2x4 SP No.3 *Except* 9-13:2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-15, 7-15, 5-15, 5-17

REACTIONS (size) 2=0-3-8, 11=0-3-8, 18=0-3-8
Max Horiz 2=-252 (LC 13)
Max Uplift 2=-407 (LC 12), 11=-545 (LC 13), 18=-146 (LC 9)
Max Grav 2=1434 (LC 2), 11=1980 (LC 2), 18=876 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2552/791, 3-5=-2337/784, 5-6=-2293/879, 6-7=-2292/884, 7-9=-4074/1335, 9-10=-6839/2148, 10-11=-6220/1841, 11-12=0/13
BOT CHORD 2-18=-696/2195, 17-18=-696/2195, 15-17=-462/2102, 13-15=-1067/4050, 11-13=-1686/5999
WEBS 6-15=-526/1707, 7-15=-1199/579, 7-14=-468/1700, 9-14=-1187/559, 9-13=-919/2860, 10-13=-1779/705, 5-15=-362/361, 3-17=-372/398, 5-17=-291/128

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; end vertical left and right exposed; porch left 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 407 lb uplift at joint 2, 545 lb uplift at joint 11 and 146 lb uplift at joint 18.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	A03	Roof Special	1	1	I66886961 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:40 Page: 1
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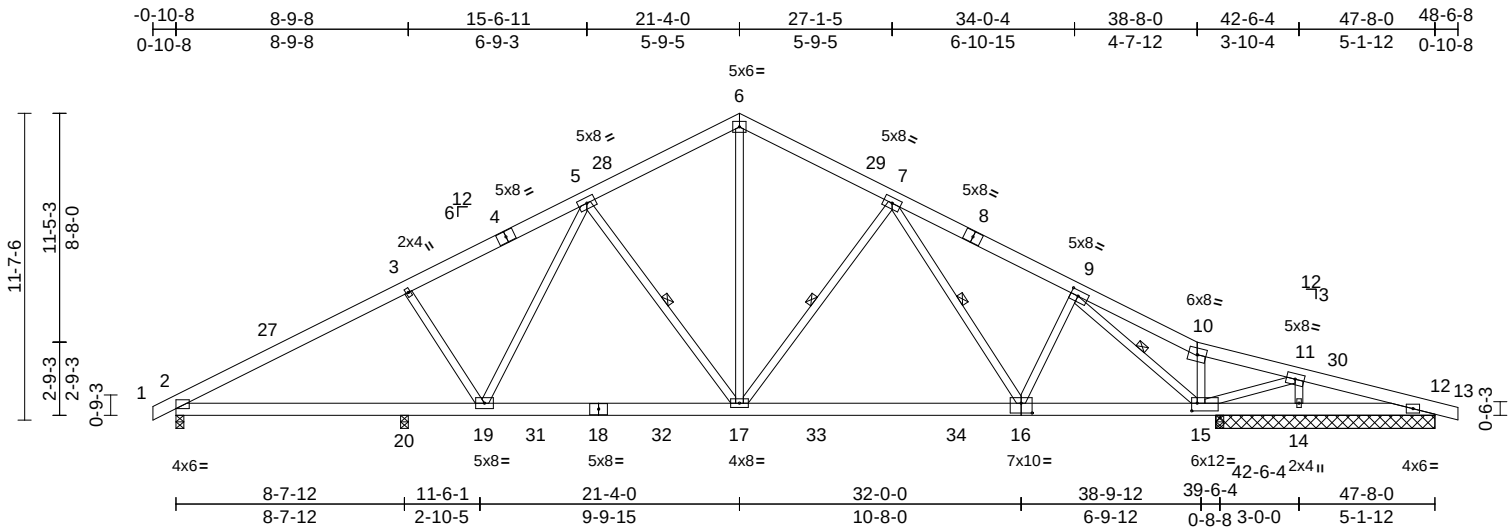

Scale = 1:87.2

Plate Offsets (X, Y): [2:Edge,0-0-0], [9:0-3-8,0-2-8], [15:0-2-8,0-3-8], [16:0-5-0,0-4-8]

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	0.37	Vert(LL)	-0.18	17-19	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.32	17-19	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.07	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.13	17-19	>999	240	Weight: 342 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-17, 7-17, 7-16, 9-15

REACTIONS (size) 2=0-3-8, 12=8-3-8, 14=8-3-8, 15=8-3-8, 20=0-3-8, 24=8-3-8
Max Horiz 2=-252 (LC 13)
Max Uplift 2=-407 (LC 12), 12=-111 (LC 9), 14=-131 (LC 9), 15=-513 (LC 13), 20=-46 (LC 12), 24=-111 (LC 9)
Max Grav 2=1397 (LC 2), 12=214 (LC 26), 14=284 (LC 26), 15=2019 (LC 2), 20=432 (LC 2), 24=214 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2327/873, 3-5=-2107/871, 5-6=-1625/742, 6-7=-1627/742, 7-9=-1751/665, 9-10=-105/434, 10-11=-175/394, 11-12=-93/168, 12-13=0/13
BOT CHORD 2-20=-677/2008, 19-20=-677/2008, 17-19=-402/1693, 15-17=-307/1546, 14-15=-130/110, 12-14=-130/110
WEBS 3-19=-398/372, 5-17=-535/412, 6-17=-408/1120, 7-17=-367/336, 7-16=-163/136, 9-16=0/488, 9-15=-2302/735, 5-19=-168/353, 10-15=-198/159, 11-15=-241/169, 11-14=-184/152

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; 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) All plates are 5x8 MT20 unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 407 lb uplift at joint 2, 111 lb uplift at joint 12, 513 lb uplift at joint 15, 131 lb uplift at joint 14, 46 lb uplift at joint 20 and 111 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC	
4111091	A04	Roof Special	1	1	Job Reference (optional)	I66886962

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

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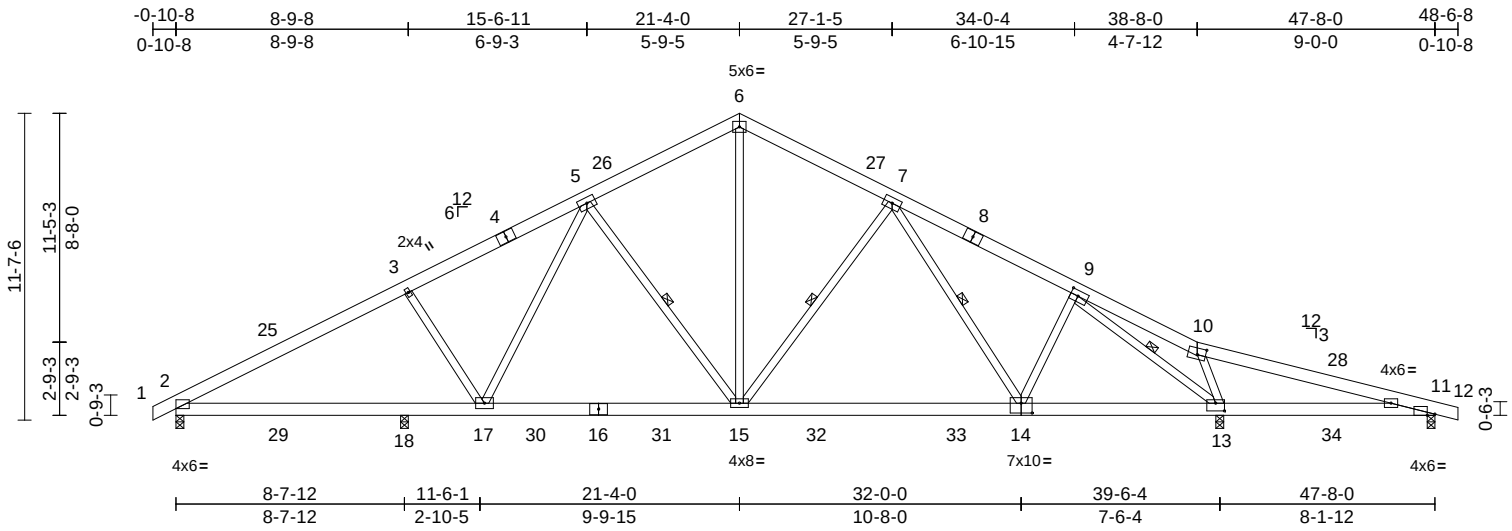

Scale = 1:87.2

Plate Offsets (X, Y): [2:Edge,0-0-0], [9:0-3-8,0-2-8], [10:0-3-12,0-3-0], [11:0-3-7,Edge], [13:0-4-0,0-3-8], [14:0-5-0,0-4-8]

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	0.39	Vert(LL)	-0.19	15-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.34	15-17	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.07	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.14	15-17	>999	240	Weight: 337 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-15, 7-15, 7-14, 9-13

REACTIONS (size) 2=0-3-8, 11=0-3-8, 13=0-3-8, 18=0-3-8
Max Horiz 2=-252 (LC 13)
Max Uplift 2=-414 (LC 12), 11=-235 (LC 9), 13=-560 (LC 13), 18=-120 (LC 9)
Max Grav 2=1427 (LC 2), 11=304 (LC 26), 13=2126 (LC 2), 18=446 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2393/748, 3-5=-2174/739, 5-6=-1710/698, 6-7=-1712/702, 7-9=-1975/646, 9-10=-163/226, 10-11=-170/289, 11-12=0/13
BOT CHORD 2-18=-690/2085, 17-18=-690/2085, 15-17=-417/1781, 13-15=-294/1679, 11-13=-241/207
WEBS 3-17=-396/422, 5-15=-528/410, 6-15=-367/1198, 7-15=-436/358, 7-14=-49/153, 9-14=0/350, 9-13=-2075/390, 5-17=-164/337, 10-13=-557/482

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; 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) All plates are 5x8 MT20 unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 414 lb uplift at joint 2, 560 lb uplift at joint 13, 235 lb uplift at joint 11 and 120 lb uplift at joint 18.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	A05	Roof Special	1	1	I66886963
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:40 Page: 1
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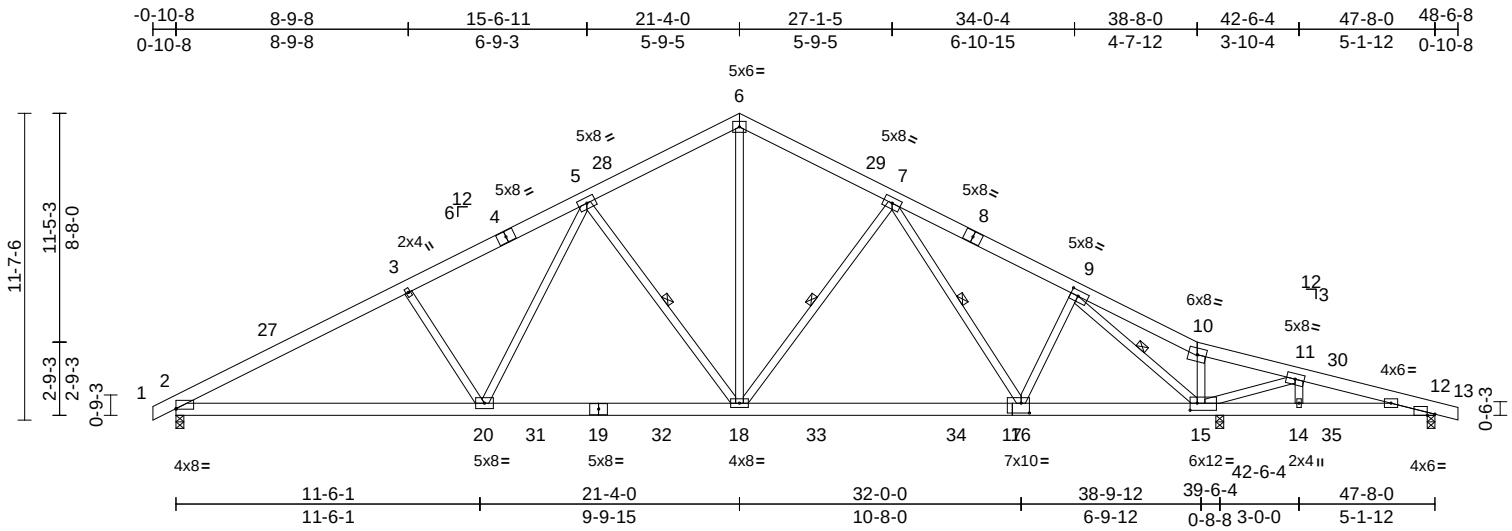

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Plate Offsets (X, Y): [2:Edge,0-0-4], [9:0-3-8,0-2-8], [12:0-3-7,Edge], [15:0-3-4,0-3-4], [16:0-3-12,0-4-8]

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	0.27	Vert(LL)	-0.18	16-18	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.31	16-18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.08	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.10	20	>999	240	Weight: 342 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-18, 7-18, 7-16, 9-15

REACTIONS (size) 2=0-3-8, 12=0-3-8, 15=0-3-8
Max Horiz 2=-252 (LC 13)
Max Uplift 2=-444 (LC 12), 12=-240 (LC 9), 15=-568 (LC 13)
Max Grav 2=1723 (LC 2), 12=289 (LC 26), 15=2309 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2864/908, 3-5=-2641/906, 5-6=-1764/727, 6-7=-1767/725, 7-9=-1821/571, 9-10=-375/605, 10-11=-425/556, 11-12=-208/436, 12-13=0/13
BOT CHORD 2-20=-733/2501, 18-20=-435/1976, 16-18=-269/1648, 15-16=-162/1360, 14-15=-366/170, 12-14=-366/183
WEBS 3-20=-423/375, 5-20=-215/774, 5-18=-761/440, 6-18=-395/1240, 7-18=-332/331, 7-16=-229/186, 9-15=-2556/929, 10-15=-180/155, 9-16=-25/554, 11-14=-332/155, 11-15=-604/939

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; end vertical left and right exposed; porch right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 5x8 MT20 unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 444 lb uplift at joint 2, 240 lb uplift at joint 12 and 568 lb uplift at joint 15.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	A06	Roof Special	5	1	I66886964 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:40 Page: 1
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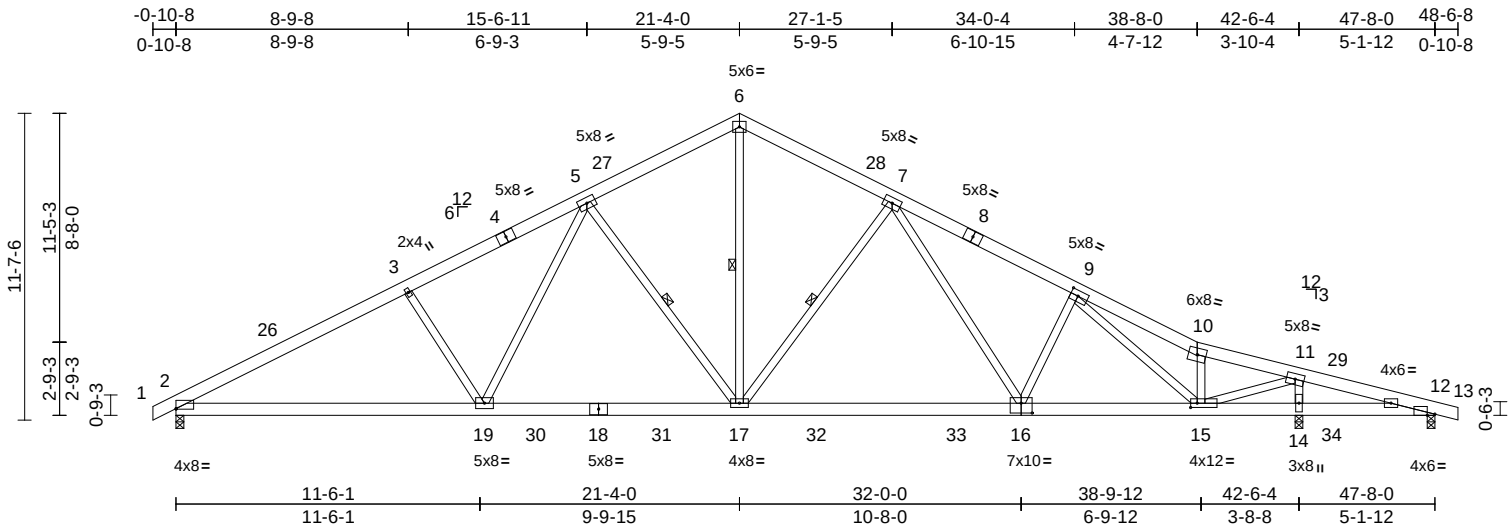

Scale = 1:87.2

Plate Offsets (X, Y): [2:Edge,0-0-4], [9:0-3-8,0-2-8], [12:0-3-7,Edge], [15:0-3-0,0-2-0], [16:0-5-0,0-4-8]

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	0.48	Vert(LL)	-0.22	16-17	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.39	16-17	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.09	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.13	17-19	>999	240	Weight: 342 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 15-11:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-17, 6-17, 7-17

REACTIONS (size) 2=0-3-8, 12=0-3-8, 14=0-3-8
Max Horiz 2=-252 (LC 13)
Max Uplift 2=-466 (LC 12), 12=-314 (LC 20), 14=-652 (LC 13)
Max Grav 2=1867 (LC 2), 12=62 (LC 12), 14=2638 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-3166/1027, 3-5=-2943/1025, 5-6=-2077/850, 6-7=-2078/849, 7-9=-2760/948, 9-10=-2025/633, 10-11=-1865/510, 11-12=-458/1477, 12-13=0/13
BOT CHORD 2-19=-774/2745, 17-19=-496/2232, 15-17=-591/2416, 14-15=-1390/475, 12-14=-1390/475
WEBS 5-17=-755/439, 6-17=-503/1512, 7-17=-603/416, 9-16=-183/270, 9-15=-865/288, 10-15=-519/250, 11-15=-898/3354, 11-14=-2295/810, 7-16=-155/551, 5-19=-213/765, 3-19=-418/374

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; end vertical left and right exposed; porch right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 5x8 MT20 unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 466 lb uplift at joint 2, 652 lb uplift at joint 14 and 314 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC	I66886965
4111091	A07	Common	11	1	Job Reference (optional)	

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:41 Page: 1
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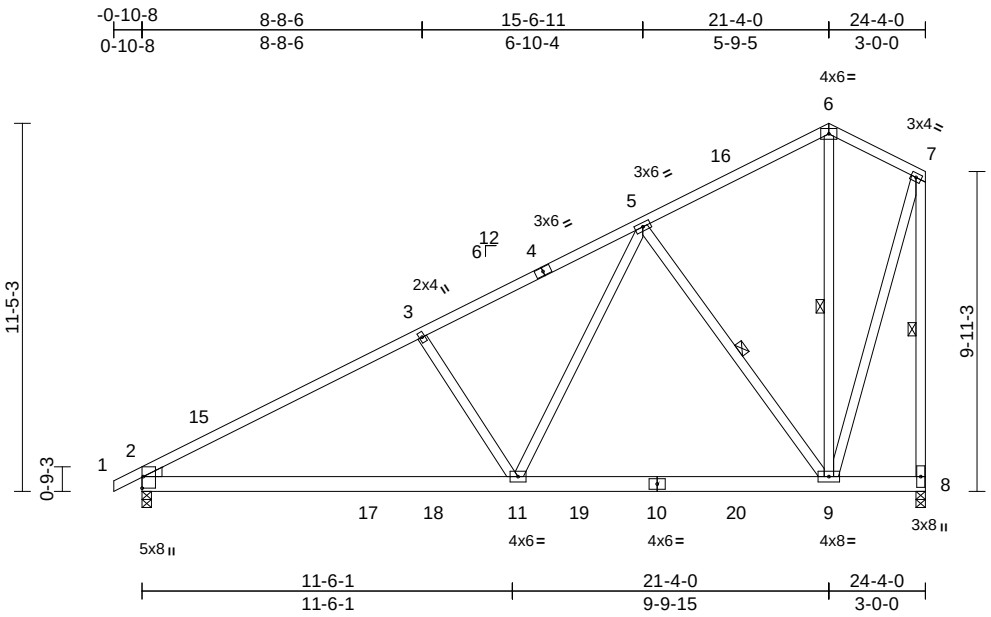

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Plate Offsets (X, Y): [2:Edge,0-0-7]

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	0.54	Vert(LL)	-0.12	11-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.24	11-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.11	11-14	>999	240	Weight: 179 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 8-7:2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-9, 5-9, 7-8

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=533 (LC 12)
Max Uplift 2=-252 (LC 12), 8=-393 (LC 12)
Max Grav 2=1117 (LC 2), 8=1086 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1565/316, 3-5=-1347/312, 5-6=-378/112, 6-7=-328/132, 7-8=-1100/374
BOT CHORD 2-11=-659/1325, 9-11=-357/754, 8-9=-2/3
WEBS 6-9=-28/123, 5-9=-833/455, 5-11=-228/870, 3-11=-423/373, 7-9=-327/951

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 21-4-0, Exterior(2E) 21-4-0 to 24-2-4 zone; end vertical left 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 252 lb uplift at joint 2 and 393 lb uplift at joint 8.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	A08	Common Supported Gable	1	1	I66886966
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:41 Page: 1

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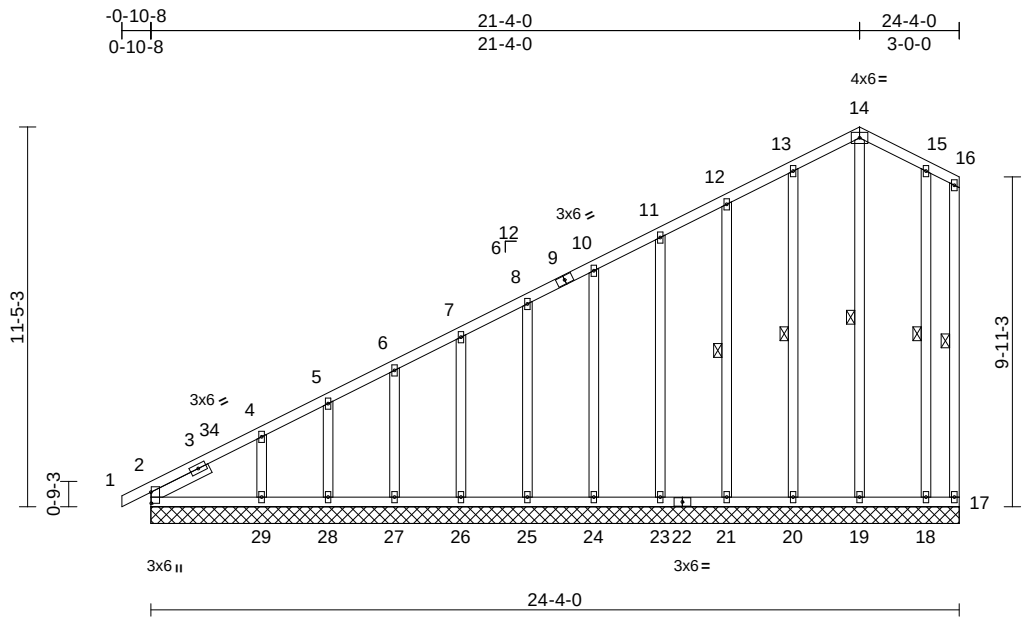

Scale = 1:69.4

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

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	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 205 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.2 -- 1-11-12

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 16-17, 14-19, 13-20, 12-21, 15-18

REACTIONS (size) 2=24-4-0, 17=24-4-0, 18=24-4-0, 19=24-4-0, 20=24-4-0, 21=24-4-0, 23=24-4-0, 24=24-4-0, 25=24-4-0, 26=24-4-0, 27=24-4-0, 28=24-4-0, 29=24-4-0, 30=24-4-0

Max Horiz 2=533 (LC 12), 30=533 (LC 12)

Max Uplift 17=-18 (LC 13), 18=-55 (LC 13), 19=-13 (LC 12), 20=-84 (LC 12), 21=-83 (LC 12), 23=-82 (LC 12), 24=-82 (LC 12), 25=-83 (LC 12), 26=-79 (LC 12), 27=-99 (LC 12), 28=-14 (LC 12), 29=-264 (LC 12)

Max Grav 2=258 (LC 12), 17=20 (LC 1), 18=128 (LC 26), 19=161 (LC 1), 20=165 (LC 25), 21=160 (LC 25), 23=160 (LC 1), 24=160 (LC 25), 25=160 (LC 1), 26=158 (LC 1), 27=169 (LC 25), 28=124 (LC 1), 29=257 (LC 25), 30=258 (LC 12)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/23, 2-4=-552/216, 4-5=-436/156, 5-6=-398/147, 6-7=-336/122, 7-8=-278/100, 8-10=-220/77, 10-11=-161/55, 11-12=-103/41, 12-13=-51/49, 13-14=-30/104, 14-15=-29/89, 15-16=-7/19, 16-17=-15/31
BOT CHORD	2-29=-1/0, 28-29=-1/0, 27-28=-1/0, 26-27=-1/0, 25-26=-1/0, 24-25=-1/0, 23-24=-1/0, 21-23=-1/0, 20-21=-1/0, 19-20=-1/0, 18-19=-1/0, 17-18=-1/0
WEBS	14-19=-119/45, 13-20=-126/113, 12-21=-120/122, 11-23=-120/120, 10-24=-120/120, 8-25=-120/120, 7-26=-119/118, 6-27=-125/133, 5-28=-99/72, 4-29=-181/283, 15-18=-96/132

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 21-4-0, Corner(3E) 21-4-0 to 24-2-4 zone; end vertical left 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 17, 13 lb uplift at joint 19, 84 lb uplift at joint 20, 83 lb uplift at joint 21, 82 lb uplift at joint 23, 82 lb uplift at joint 24, 83 lb uplift at joint 25, 79 lb uplift at joint 26, 99 lb uplift at joint 27, 14 lb uplift at joint 28, 264 lb uplift at joint 29 and 55 lb uplift at joint 18.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	G01	Common Supported Gable	1	1	I66886967 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:41 Page: 1
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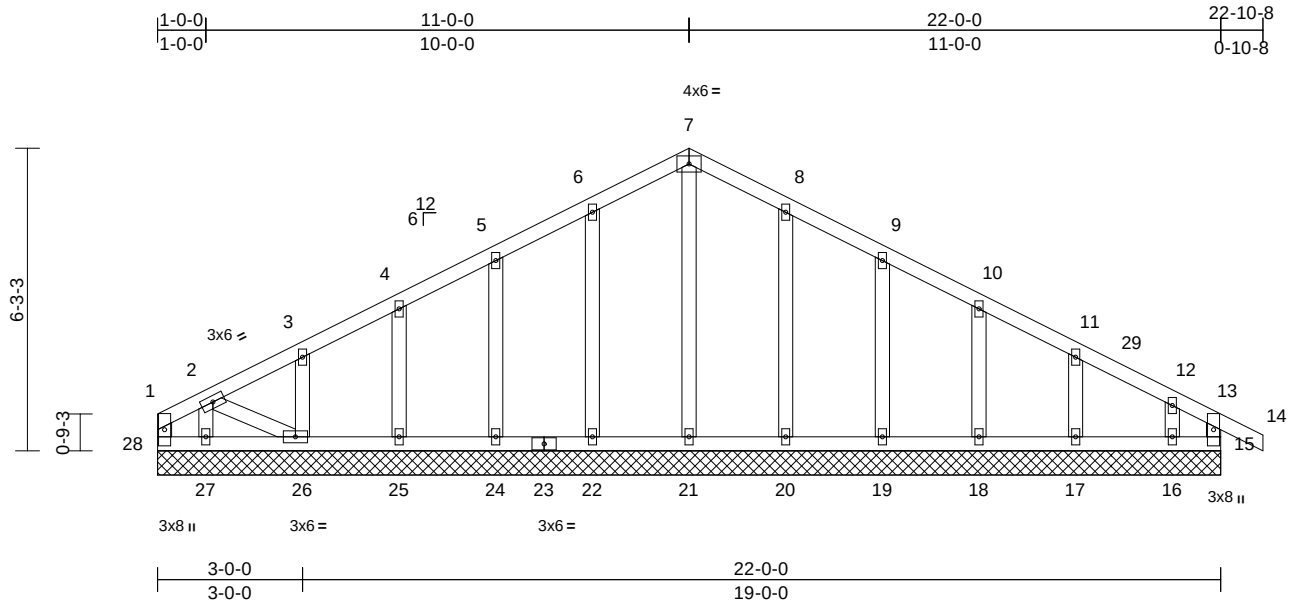


Scale = 1:47.7

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 124 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 15-13:2x4 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS (size) 15=22-0-0, 16=22-0-0, 17=22-0-0, 18=22-0-0, 19=22-0-0, 20=22-0-0, 21=22-0-0, 22=22-0-0, 24=22-0-0, 25=22-0-0, 26=22-0-0, 27=22-0-0, 28=22-0-0
Max Horiz 28=-128 (LC 10)
Max Uplift 15=-19 (LC 9), 16=-123 (LC 13), 17=-81 (LC 13), 18=-82 (LC 13), 19=-84 (LC 13), 20=-80 (LC 13), 22=-82 (LC 12), 24=-84 (LC 12), 25=-82 (LC 12), 26=-129 (LC 12), 27=-2 (LC 12), 28=-34 (LC 13)
Max Grav 15=118 (LC 1), 16=89 (LC 20), 17=169 (LC 1), 18=158 (LC 26), 19=160 (LC 1), 20=167 (LC 26), 21=175 (LC 22), 22=167 (LC 25), 24=159 (LC 1), 25=159 (LC 25), 26=167 (LC 1), 27=126 (LC 25), 28=47 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-28=-33/27, 1-2=-54/45, 2-3=-111/74, 3-4=-68/98, 4-5=-54/131, 5-6=-74/182, 6-7=-96/243, 7-8=-96/243, 8-9=-74/182, 9-10=-51/116, 10-11=-31/52, 11-12=-60/32, 12-13=-112/43, 13-14=0/27, 13-15=-104/58
BOT CHORD 27-28=-74/105, 26-27=-74/105, 25-26=-41/130, 24-25=-41/130, 22-24=-41/130, 21-22=-41/130, 20-21=-41/130, 19-20=-41/130, 18-19=-41/130, 17-18=-41/130, 16-17=-41/130, 15-16=-41/130
WEBS 7-21=-135/0, 6-22=-127/114, 5-24=-119/124, 4-25=-119/119, 3-26=-124/155, 2-27=-95/76, 8-20=-127/113, 9-19=-119/124, 10-18=-119/118, 11-17=-126/134, 12-16=-82/140, 2-26=-41/111

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(3E) 0-1-12 to 3-0-0, Exterior(2N) 3-0-0 to 11-0-0, Corner(3R) 11-0-0 to 14-0-0, Exterior (2N) 14-0-0 to 22-10-8 zone; 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 28, 19 lb uplift at joint 15, 82 lb uplift at joint 22, 84 lb uplift at joint 24, 82 lb uplift at joint 25, 2 lb uplift at joint 27, 80 lb uplift at joint 20, 84 lb uplift at joint 19, 82 lb uplift at joint 18, 81 lb uplift at joint 17, 123 lb uplift at joint 16 and 129 lb uplift at joint 26.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

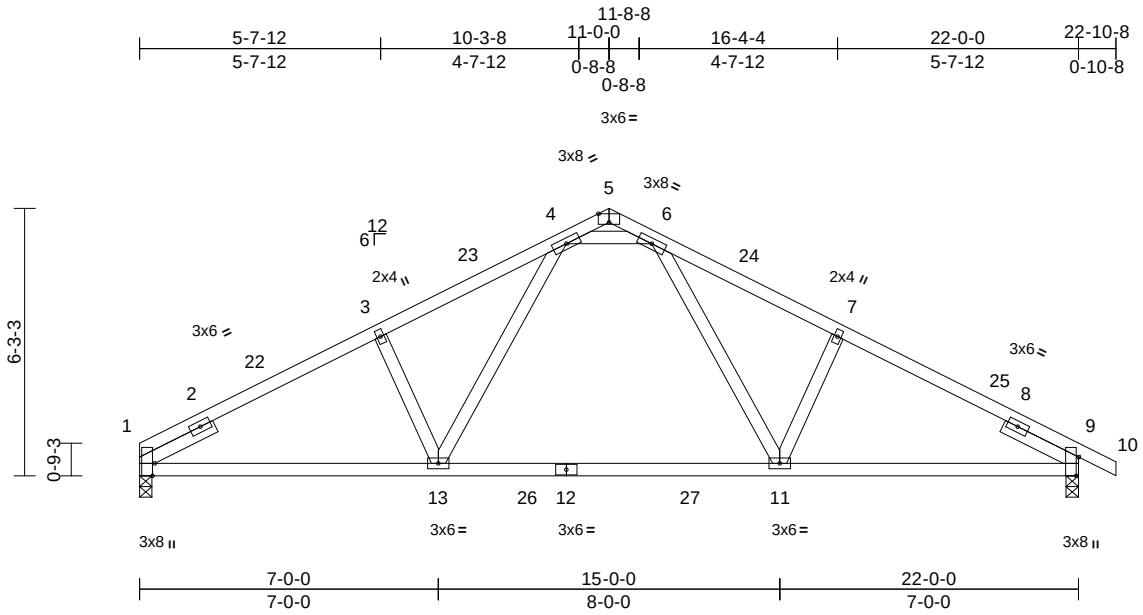
July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC
4111091	G02	Common	1	1	I66886968
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:41 Page: 1

ID:2CGL7QvwIKXq?Hjccu?XlJz7MjG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54

Plate Offsets (X, Y): [1:0-3-8,Edge], [5:0-3-0,Edge], [9:0-5-4,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	0.39	Vert(LL)	-0.19	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.32	11-13	>823	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.07	11-13	>999	240	Weight: 107 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 -- 1-11-12, Right 2x4 SP No.2 -- 1-11-12

BRACING

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

REACTIONS (size) 1=0-3-8, 9=0-3-8
Max Horiz 1=-143 (LC 17)
Max Uplift 1=-229 (LC 12), 9=-258 (LC 13)
Max Grav 1=963 (LC 2), 9=1008 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-3=-1476/470, 3-4=-1393/503, 4-5=-72/94, 5-6=-72/94, 6-7=-1380/495, 7-9=-1473/462, 9-10=0/23
BOT CHORD 1-13=-345/1269, 11-13=-170/975, 9-11=-305/1264
WEBS 6-11=-168/523, 7-11=-258/263, 4-13=-170/529, 3-13=-263/265, 4-6=-1046/511

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 22-10-8 zone; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 229 lb uplift at joint 1 and 258 lb uplift at joint 9.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

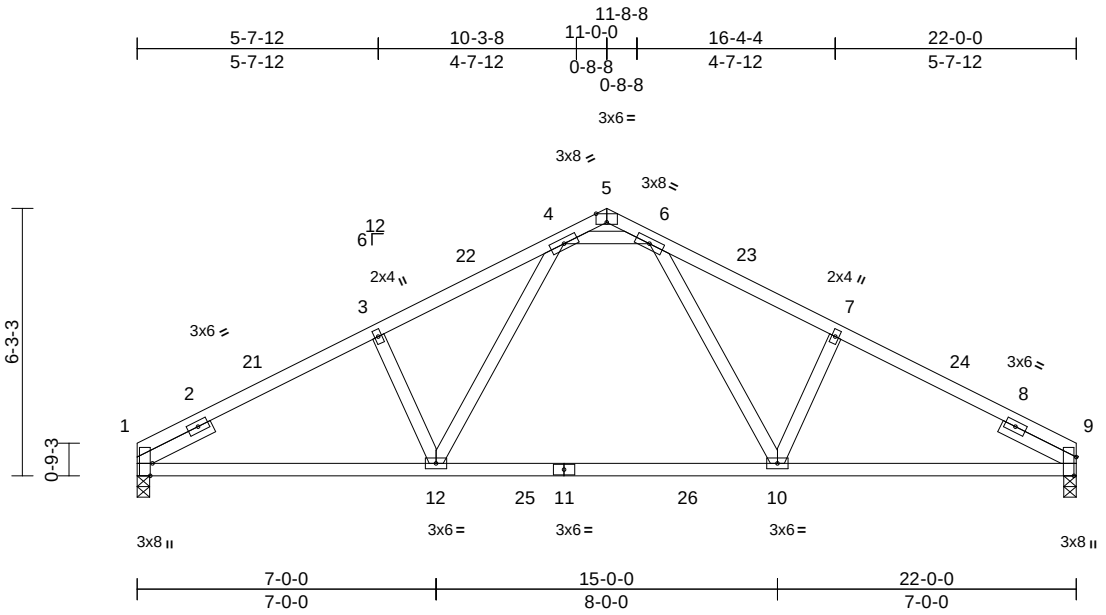
July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	4955 Ray Rd Spring Lake, NC	I66886969
4111091	G03	Common	10	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 08:39:41 Page: 1

ID:f2K2cij0QQQY_LBROOhiqxz7Mgw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54

Plate Offsets (X, Y): [1:0-3-8,Edge], [5:0-3-0,Edge], [9:0-5-4,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	0.37	Vert(LL)	-0.19	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.32	10-12	>824	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.04	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.07	10-12	>999	240	Weight: 106 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 -- 1-11-12, Right 2x4 SP No.2 -- 1-11-12

BRACING

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

REACTIONS (size) 1=0-3-8, 9=0-3-8
Max Horiz 1=124 (LC 16)
Max Uplift 1=-230 (LC 12), 9=-230 (LC 13)
Max Grav 1=964 (LC 2), 9=964 (LC 2)

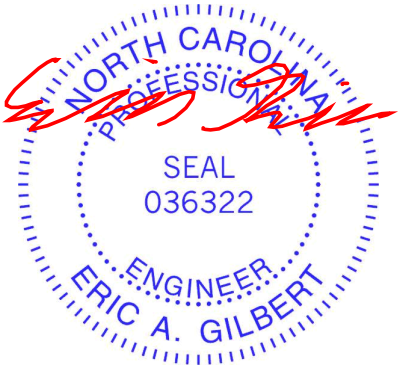
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-3=-1477/470, 3-4=-1394/504, 4-5=-72/93, 5-6=-72/93, 6-7=-1394/504, 7-9=-1477/470
BOT CHORD 1-12=-355/1269, 10-12=-197/977, 9-10=-327/1269
WEBS 6-10=-170/528, 7-10=-263/265, 4-12=-170/528, 3-12=-263/265, 4-6=-1046/511

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; 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(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 22-0-0 zone; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 230 lb uplift at joint 1 and 230 lb uplift at joint 9.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



July 16,2024

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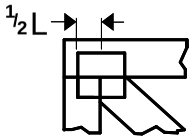
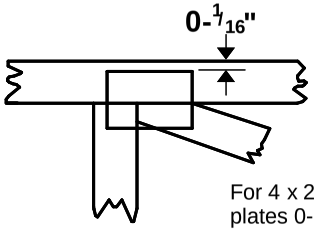
818 Soundside Road
Edenton, NC 27932

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.

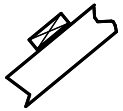
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

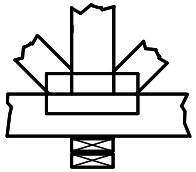
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

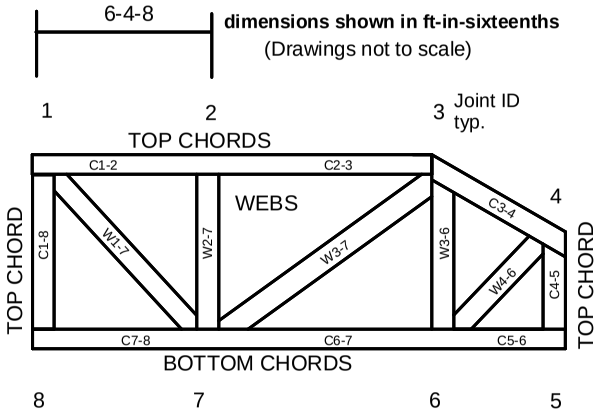


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.