ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 250312-A
102 Ducks Landing

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: Cates Building Project Name: 250312-A
Lot/Block: Model:
Address: 451 Black Duck Ln. Subdivision: Ducks Landing
City: Lillington State: NC

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

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 25.2
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 15 individual, dated Truss Design Drawings and 0 Additional Drawings.

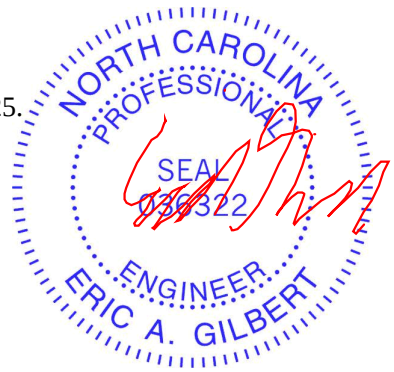
No.	Seal#	Truss Name	Date
1	I75459233	A01GE	8/7/2025
2	I75459234	A02	8/7/2025
3	I75459235	A04	8/7/2025
4	I75459236	A05	8/7/2025
5	I75459237	A06	8/7/2025
6	I75459238	A07GE	8/7/2025
7	I75459239	B01GE	8/7/2025
8	I75459240	B02	8/7/2025
9	I75459241	B03-GR	8/7/2025
10	I75459242	M01GE	8/7/2025
11	I75459243	M02	8/7/2025
12	I75459244	V1	8/7/2025
13	I75459245	V2	8/7/2025
14	I75459246	V3	8/7/2025
15	I75459247	V4	8/7/2025

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

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.

August 07, 2025

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	A01GE	COMMON SUPPORTED GAB	1	1	Job Reference (optional)	I75459233

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:43 Page: 1
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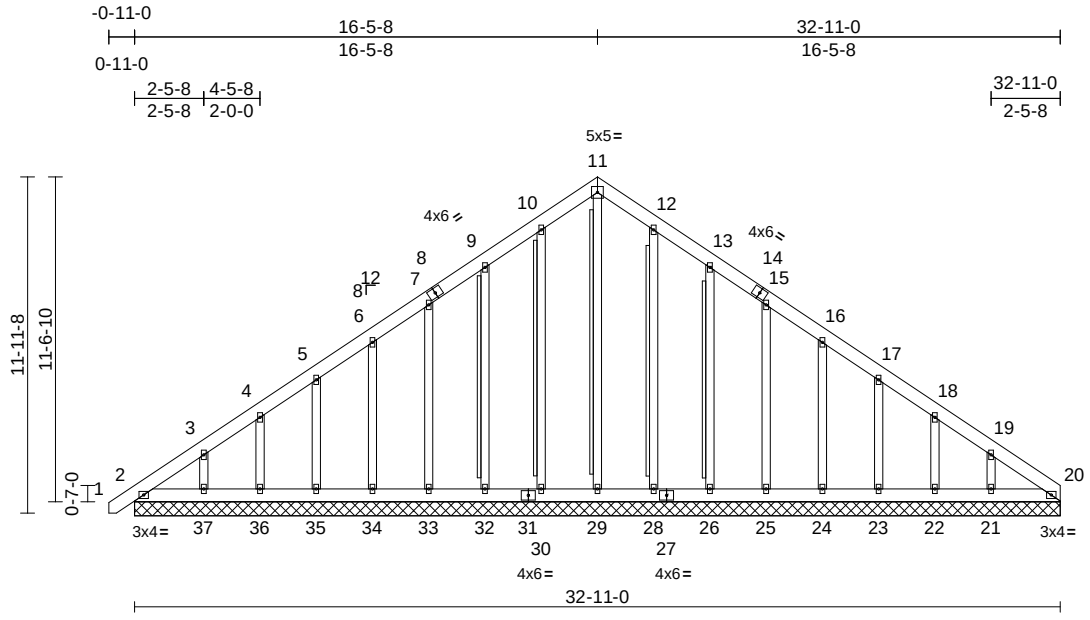

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Plate Offsets (X, Y): [14:0-0-0,0-0-0]

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 299 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2 *Except* 0-0,0-0,0-0,0-0,0-0:2x4 SPF No.2(flat)

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 T-Brace: 2x4 SPF No.2 - 11-29, 10-30, 9-32, 12-28, 13-26
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=32-11-0, 20=32-11-0, 21=32-11-0, 22=32-11-0, 23=32-11-0, 24=32-11-0, 25=32-11-0, 26=32-11-0, 28=32-11-0, 29=32-11-0, 30=32-11-0, 32=32-11-0, 33=32-11-0, 34=32-11-0, 35=32-11-0, 36=32-11-0, 37=32-11-0
Max Horiz 2=340 (LC 9)
Max Uplift 2=-78 (LC 8), 20=-19 (LC 11), 21=-121 (LC 13), 22=-81 (LC 13), 23=-88 (LC 13), 24=-87 (LC 13), 25=-88 (LC 13), 26=-103 (LC 13), 28=-41 (LC 13), 30=-53 (LC 12), 32=-99 (LC 12), 33=-88 (LC 12), 34=-87 (LC 12), 35=-88 (LC 12), 36=-83 (LC 12), 37=-115 (LC 12)
Max Grav 2=208 (LC 20), 20=146 (LC 22), 21=232 (LC 20), 22=162 (LC 20), 23=179 (LC 20), 24=176 (LC 20), 25=177 (LC 20), 26=182 (LC 20), 28=169 (LC 20), 29=225 (LC 13), 30=182 (LC 19), 32=178 (LC 19), 33=176 (LC 19), 34=176 (LC 19), 35=179 (LC 19), 36=165 (LC 19), 37=221 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-350/256, 3-4=-256/216, 4-5=-214/191, 5-6=-185/169, 6-7=-164/169, 7-9=-144/212, 9-10=-160/261, 10-11=-183/285, 11-12=-183/285, 12-13=-160/239, 13-15=-114/161, 15-16=-77/94, 16-17=-93/58, 17-18=-112/80, 18-19=-180/104, 19-20=-277/147
BOT CHORD 2-37=-120/258, 36-37=-120/258, 35-36=-120/258, 34-35=-120/258, 33-34=-120/258, 32-33=-120/258, 30-32=-120/258, 29-30=-120/258, 28-29=-120/258, 26-28=-120/258, 25-26=-120/258, 24-25=-120/258, 23-24=-120/258, 22-23=-120/258, 21-22=-120/258, 20-21=-120/258
WEBS 11-29=-201/77, 10-30=-142/77, 9-32=-138/123, 7-33=-136/112, 6-34=-136/111, 5-35=-137/112, 4-36=-131/108, 3-37=-164/137, 12-28=-129/65, 13-26=-142/127, 15-25=-136/112, 16-24=-136/111, 17-23=-138/112, 18-22=-128/105, 19-21=-172/143

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-9-7 to 3-7-6, Exterior(2N) 3-7-6 to 16-5-8, Corner(3R) 16-5-8 to 20-10-5, Exterior(2N) 20-10-5 to 32-11-0 zone;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 30.0psf 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.

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Continued on page 2

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9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 2, 53 lb uplift at joint 30, 99 lb uplift at joint 32, 88 lb uplift at joint 33, 87 lb uplift at joint 34, 88 lb uplift at joint 35, 83 lb uplift at joint 36, 115 lb uplift at joint 37, 41 lb uplift at joint 28, 103 lb uplift at joint 26, 88 lb uplift at joint 25, 87 lb uplift at joint 24, 88 lb uplift at joint 23, 81 lb uplift at joint 22, 121 lb uplift at joint 21 and 19 lb uplift at joint 20.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 20.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

August 7,2025

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Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	A02	COMMON	6	1	Job Reference (optional)	I75459234

Comtech, Inc, Fayetteville, NC - 28314,

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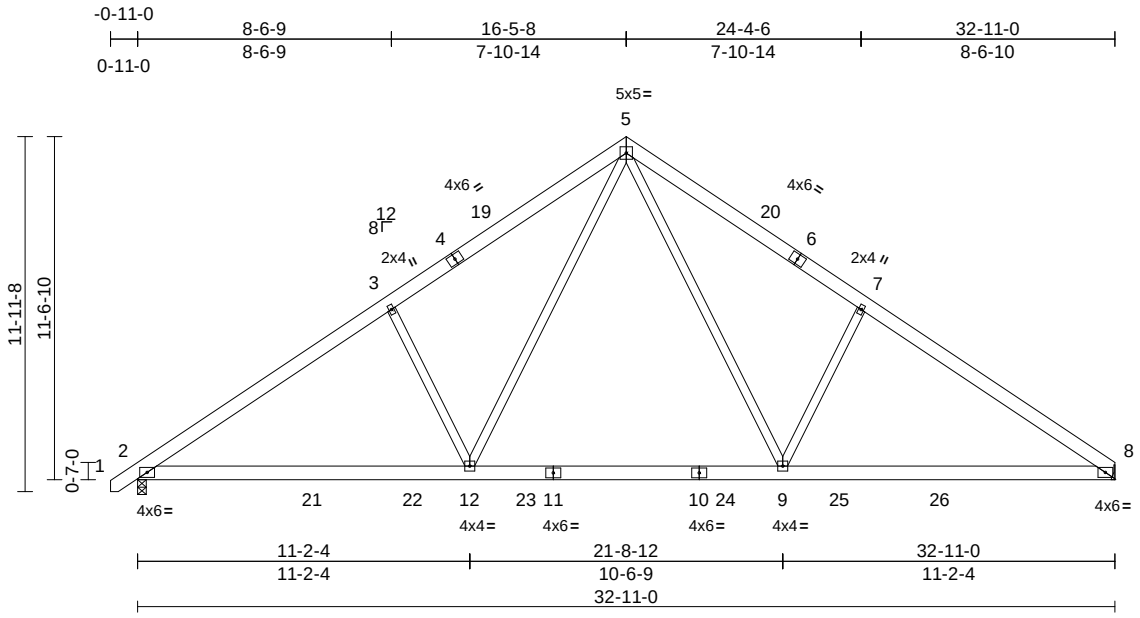

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.16	9-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.24	9-18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	12-15	>999	240	Weight: 226 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 8= Mechanical
Max Horiz 2=271 (LC 11)
Max Uplift 2=-81 (LC 12), 8=-70 (LC 13)
Max Grav 2=1719 (LC 19), 8=1674 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-2355/392, 3-5=-2235/486, 5-7=-2237/489, 7-8=-2357/394
BOT CHORD 2-12=-215/2087, 9-12=-7/1349, 8-9=-203/1900
WEBS 5-9=-174/1184, 7-9=-532/310, 5-12=-172/1180, 3-12=-530/309

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-7 to 3-7-6, Interior (1) 3-7-6 to 16-5-8, Exterior(2R) 16-5-8 to 20-10-5, Interior (1) 20-10-5 to 32-11-0 zone;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 30.0psf 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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 2 and 70 lb uplift at joint 8.
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

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Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	A04	COMMON	3	1	Job Reference (optional)	I75459235

Comtech, Inc, Fayetteville, NC - 28314,

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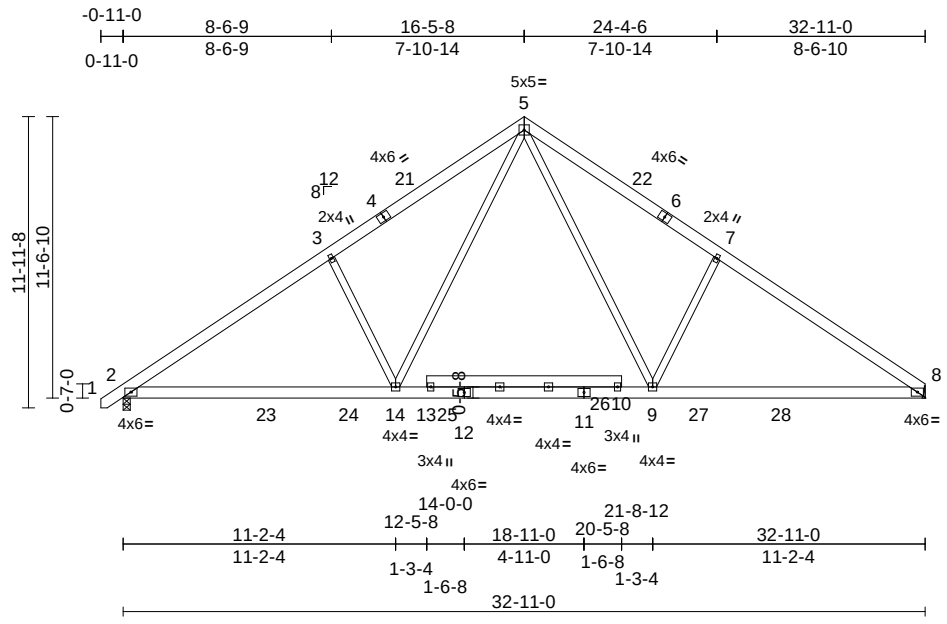

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Plate Offsets (X, Y): [6:0-0-0,0-0-0]

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	0.27	Vert(LL)	-0.14	9-20	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.25	9-20	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	9-20	>999	240	Weight: 244 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 8= Mechanical
Max Horiz 2=271 (LC 11)
Max Uplift 2=-81 (LC 12), 8=-70 (LC 13)
Max Grav 2=1712 (LC 19), 8=1667 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-2339/394, 3-5=-2219/488, 5-7=-2220/491, 7-8=-2340/397
BOT CHORD 2-14=-217/2074, 9-14=-16/1340, 8-9=-204/1887
WEBS 5-9=-175/1174, 7-9=-534/309, 5-14=-174/1171, 3-14=-532/308

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-7 to 3-7-6, Interior (1) 3-7-6 to 16-5-8, Exterior(2R) 16-5-8 to 20-10-5, Interior (1) 20-10-5 to 32-11-0 zone;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 30.0psf 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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 2 and 70 lb uplift at joint 8.
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.

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Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	A05	COMMON	1	1	Job Reference (optional)	I75459236

Comtech, Inc, Fayetteville, NC - 28314,

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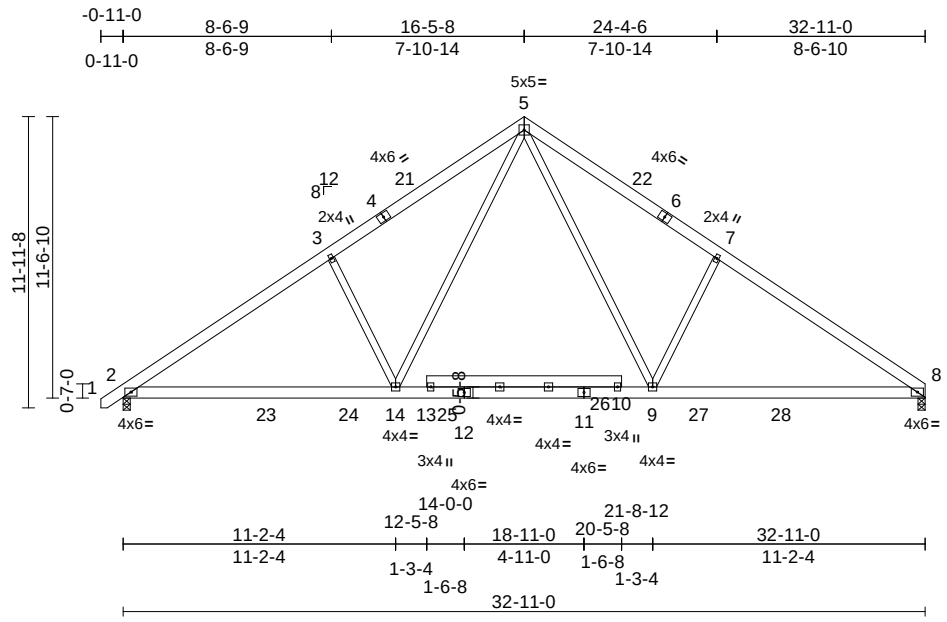

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.14	9-20	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.25	9-20	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	9-20	>999	240	Weight: 244 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=271 (LC 11)
Max Uplift 2=-81 (LC 12), 8=-70 (LC 13)
Max Grav 2=1712 (LC 19), 8=1667 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-2339/394, 3-5=-2219/488, 5-7=-2220/491, 7-8=-2340/397
BOT CHORD 2-14=-217/2074, 9-14=-16/1340, 8-9=-204/1887
WEBS 5-9=-175/1174, 7-9=-534/309, 5-14=-174/1171, 3-14=-532/308

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-7 to 3-7-6, Interior (1) 3-7-6 to 16-5-8, Exterior(2R) 16-5-8 to 20-10-5, Interior (1) 20-10-5 to 32-11-0 zone;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 30.0psf 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 81 lb uplift at joint 2 and 70 lb uplift at joint 8.
6) 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.

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Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	A06	COMMON	3	1	Job Reference (optional)	I75459237

Comtech, Inc, Fayetteville, NC - 28314,

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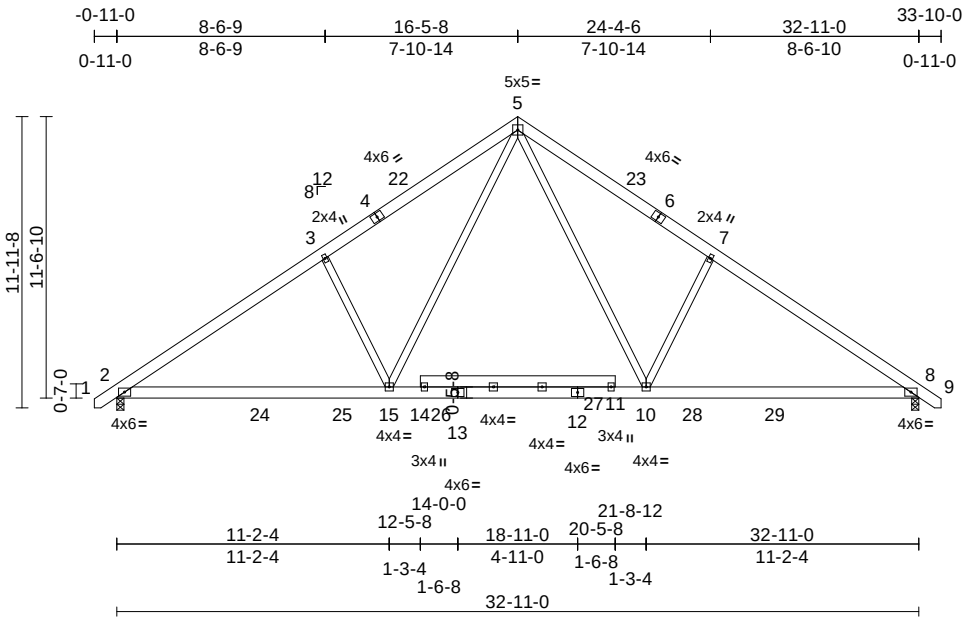

Scale = 1:94.6

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	0.27	Vert(LL)	-0.14	10-21	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.25	10-21	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.05	15-18	>999	240	Weight: 247 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-276 (LC 10)
Max Uplift 2=-81 (LC 12), 8=-81 (LC 13)
Max Grav 2=1711 (LC 19), 8=1711 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-2338/394, 3-5=-2218/488, 5-7=-2218/488, 7-8=-2338/394, 8-9=0/26
BOT CHORD 2-15=-185/2080, 10-15=0/1345, 8-10=-178/1892
WEBS 5-10=-174/1171, 7-10=-532/308, 5-15=-174/1172, 3-15=-532/308

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-7 to 3-7-6, Interior (1) 3-7-6 to 16-5-8, Exterior(2R) 16-5-8 to 20-10-5, Interior (1) 20-10-5 to 33-8-7 zone;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 30.0psf 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 81 lb uplift at joint 2 and 81 lb uplift at joint 8.
6) 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.

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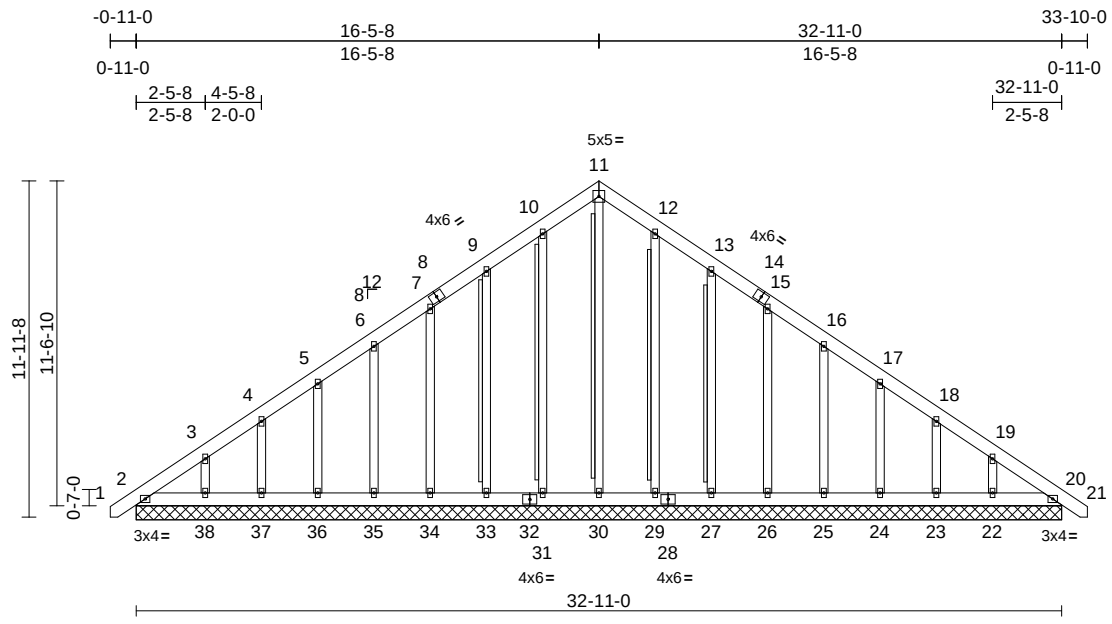
August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	A07GE	COMMON SUPPORTED GAB	1	1	Job Reference (optional)	I75459238

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:44 ID:m8kUpdOl7IjLt0kTnjZgdHzDyvE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.9

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 302 lb	FT = 25%

LUMBER

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2 *Except* 0-0,0-0,0-0,0-0,0-0:2x4 SPF No.2(flat)

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 T-Brace: 2x4 SPF No.2 - 11-30, 10-31, 9-33, 12-29, 13-27
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=32-11-0, 20=32-11-0, 22=32-11-0, 23=32-11-0, 24=32-11-0, 25=32-11-0, 26=32-11-0, 27=32-11-0, 29=32-11-0, 30=32-11-0, 31=32-11-0, 33=32-11-0, 34=32-11-0, 35=32-11-0, 36=32-11-0, 37=32-11-0, 38=32-11-0
Max Horiz 2=-344 (LC 10)
Max Uplift 2=-80 (LC 8), 20=-15 (LC 9), 22=-112 (LC 13), 23=-83 (LC 13), 24=-88 (LC 13), 25=-87 (LC 13), 26=-88 (LC 13), 27=-103 (LC 13), 29=-41 (LC 13), 31=-53 (LC 12), 33=-100 (LC 12), 34=-88 (LC 12), 35=-87 (LC 12), 36=-88 (LC 12), 37=-83 (LC 12), 38=-114 (LC 12)
Max Grav 2=209 (LC 20), 20=161 (LC 22), 22=219 (LC 20), 23=165 (LC 20), 24=179 (LC 20), 25=176 (LC 20), 26=177 (LC 20), 27=182 (LC 20), 29=168 (LC 20), 30=230 (LC 13), 31=182 (LC 19), 33=178 (LC 19), 34=176 (LC 19), 35=176 (LC 19), 36=179 (LC 19), 37=165 (LC 19), 38=221 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-347/259, 3-4=-254/219, 4-5=-212/194, 5-6=-187/172, 6-7=-166/175, 7-9=-145/218, 9-10=-163/267, 10-11=-185/294, 11-12=-185/294, 12-13=-163/249, 13-15=-116/171, 15-16=-75/100, 16-17=-91/60, 17-18=-107/79, 18-19=-175/104, 19-20=-268/143, 20-21=0/23
BOT CHORD 2-38=-123/271, 37-38=-123/271, 36-37=-123/271, 35-36=-123/271, 34-35=-123/271, 33-34=-123/271, 31-33=-123/271, 30-31=-123/271, 29-30=-123/271, 27-29=-123/271, 26-27=-123/271, 25-26=-123/271, 24-25=-123/271, 23-24=-123/271, 22-23=-123/271, 20-22=-123/271
WEBS 11-30=-207/79, 10-31=-142/77, 9-33=-138/124, 7-34=-136/112, 6-35=-136/111, 5-36=-137/112, 4-37=-131/108, 3-38=-164/136, 12-29=-128/65, 13-27=-142/127, 15-26=-136/112, 16-25=-136/111, 17-24=-137/112, 18-23=-131/107, 19-22=-162/135

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-9-7 to 3-7-6, Exterior(2N) 3-7-6 to 16-5-8, Corner(3R) 16-5-8 to 20-10-5, Exterior(2N) 20-10-5 to 33-8-7 zone;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 30.0psf 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.

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Continued on page 2

ENGINEERING BY TRENCO
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9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 2, 53 lb uplift at joint 31, 100 lb uplift at joint 33, 88 lb uplift at joint 34, 87 lb uplift at joint 35, 88 lb uplift at joint 36, 83 lb uplift at joint 37, 114 lb uplift at joint 38, 41 lb uplift at joint 29, 103 lb uplift at joint 27, 88 lb uplift at joint 26, 87 lb uplift at joint 25, 88 lb uplift at joint 24, 83 lb uplift at joint 23, 112 lb uplift at joint 22 and 15 lb uplift at joint 20.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 20.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

LOAD CASE(S) Standard

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	B01GE	GABLE	1	1	Job Reference (optional)	I75459239

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:45 Page: 1
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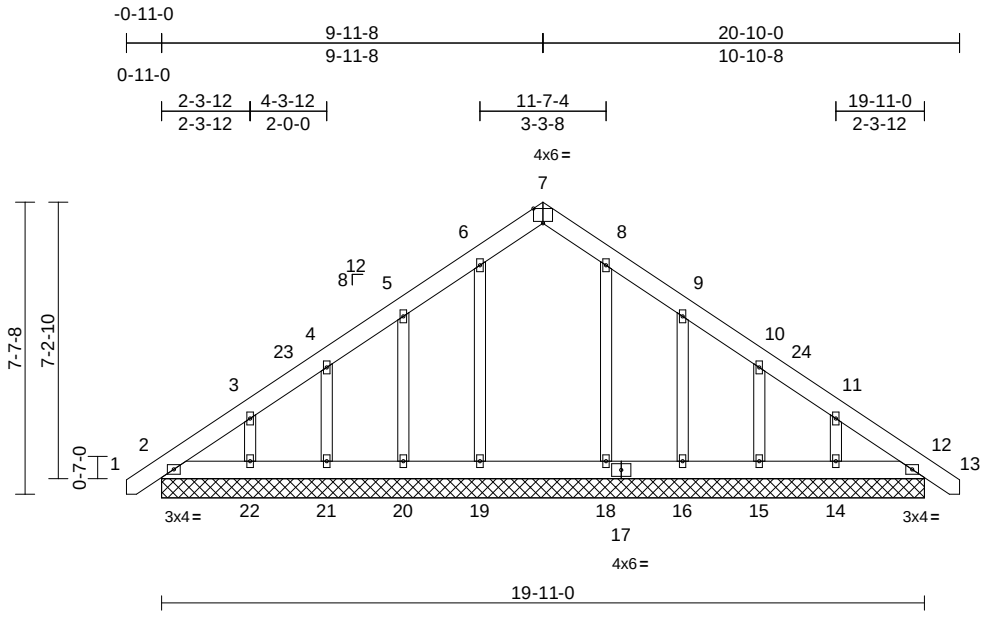

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Plate Offsets (X, Y): [7:0-3-0,Edge]

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	0.04	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	12	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 147 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.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=19-11-0, 12=19-11-0, 14=19-11-0, 15=19-11-0, 16=19-11-0, 18=19-11-0, 19=19-11-0, 20=19-11-0, 21=19-11-0, 22=19-11-0
Max Horiz 2=-215 (LC 10)
Max Uplift 2=-18 (LC 8), 14=-106 (LC 13), 15=-82 (LC 13), 16=-113 (LC 13), 18=-6 (LC 13), 19=-25 (LC 12), 20=-108 (LC 12), 21=-82 (LC 12), 22=-107 (LC 12)
Max Grav 2=185 (LC 20), 12=169 (LC 19), 14=243 (LC 20), 15=203 (LC 20), 16=184 (LC 20), 18=291 (LC 20), 19=313 (LC 19), 20=178 (LC 19), 21=204 (LC 19), 22=244 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-231/128, 3-4=-156/92, 4-5=-134/69, 5-6=-118/96, 6-7=-100/124, 7-8=-97/124, 8-9=-93/93, 9-10=-106/33, 10-11=-137/54, 11-12=-206/90, 12-13=0/23
BOT CHORD 2-22=-84/239, 21-22=-84/239, 20-21=-84/239, 19-20=-84/239, 18-19=-84/239, 16-18=-84/239, 15-16=-84/239, 14-15=-84/239, 12-14=-84/239
WEBS 6-19=-149/60, 5-20=-134/144, 4-21=-132/120, 3-22=-156/157, 8-18=-127/41, 9-16=-140/143, 10-15=-132/120, 11-14=-155/157

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-9-7 to 3-7-6, Exterior(2N) 3-7-6 to 9-11-8, Corner(3R) 9-11-8 to 14-4-5, Exterior(2N) 14-4-5 to 20-8-7 zone;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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 2, 25 lb uplift at joint 19, 108 lb uplift at joint 20, 82 lb uplift at joint 21, 107 lb uplift at joint 22, 6 lb uplift at joint 18, 113 lb uplift at joint 16, 82 lb uplift at joint 15 and 106 lb uplift at joint 14.

LOAD CASE(S) Standard

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	B02	COMMON	4	1	Job Reference (optional)	I75459240

Comtech, Inc, Fayetteville, NC - 28314,

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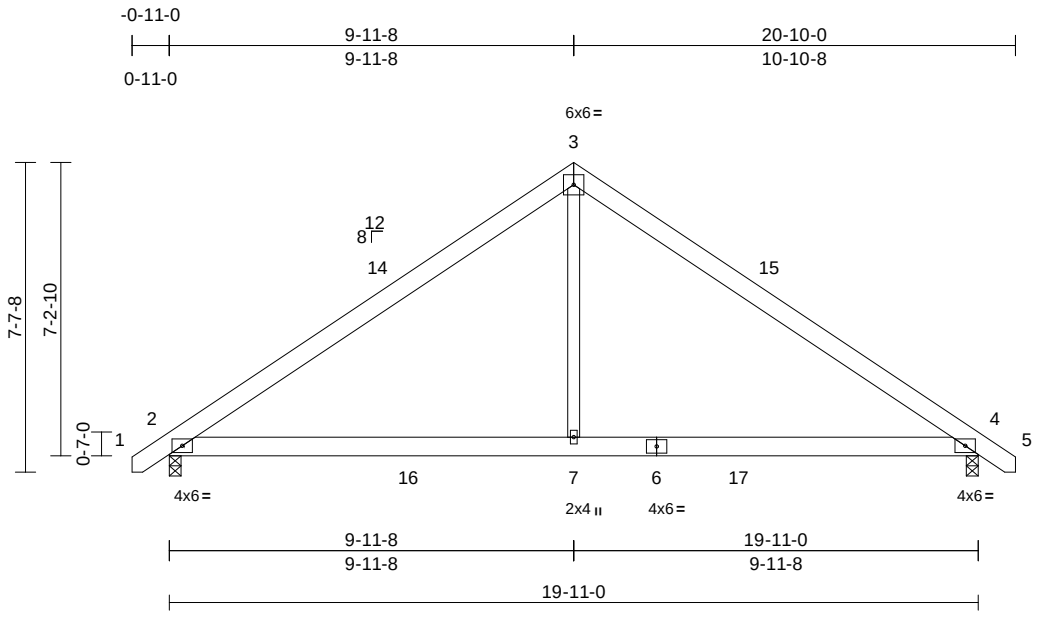

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.10	7-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.16	7-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-AS		Wind(LL)	0.06	7-10	>999	240	Weight: 118 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 4=0-3-8
Max Horiz 2=-172 (LC 10)
Max Uplift 2=-53 (LC 12), 4=-53 (LC 13)
Max Grav 2=1057 (LC 19), 4=1057 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-1233/228, 3-4=-1233/228, 4-5=0/26
BOT CHORD 2-7=-42/994, 4-7=-38/994
WEBS 3-7=0/747

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-7 to 3-7-6, Interior (1) 3-7-6 to 9-11-8, Exterior(2R) 9-11-8 to 14-4-5, Interior (1) 14-4-5 to 20-8-7 zone;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 30.0psf 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 53 lb uplift at joint 2 and 53 lb uplift at joint 4.
6) 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

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	B03-GR	Common Girder	1	2	Job Reference (optional)	I75459241

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 E Jun 11 2025 Print: 25.2.0 E Jun 11 2025 MiTek Industries, Inc. Thu Aug 07 11:36:50 Page: 1
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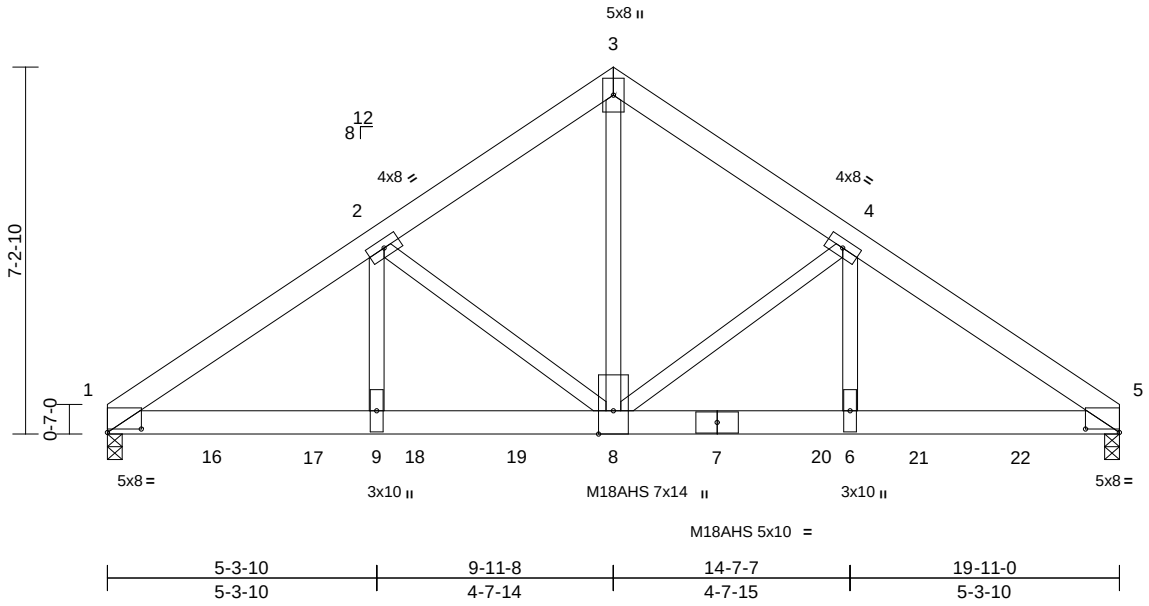

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Plate Offsets (X, Y): [1:0-8-0,0-0-13], [5:0-8-0,0-0-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.12	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.20	8-9	>999	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.06	5	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-MS		Wind(LL)	0.06	8-9	>999	240	Weight: 278 lb	FT = 25%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2 *Except* 8-3:2x4 SP No.1

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=6590/0-3-8, 5=6668/0-3-8
Max Horiz 1=-159 (LC 6)
Max Uplift 1=-408 (LC 8), 5=-412 (LC 9)
Max Grav 1=8129 (LC 15), 5=8217 (LC 16)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-11992/617, 2-3=-8306/484, 3-4=-8308/484, 4-5=-11990/618
BOT CHORD 1-16=-523/10083, 16-17=-523/10083, 9-17=-523/10083, 9-18=-523/10083, 18-19=-523/10083, 8-19=-523/10083, 7-8=-450/9977, 7-20=-450/9977, 6-20=-450/9977, 6-21=-450/9977, 21-22=-450/9977, 5-22=-450/9977
WEBS 3-8=-448/8827, 4-8=-3992/303, 4-6=-156/4164, 2-8=-3986/301, 2-9=-155/4174

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 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 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
5) All plates are MT20 plates unless otherwise indicated.
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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 408 lb uplift at joint 1 and 412 lb uplift at joint 5.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1654 lb down and 82 lb up at 2-0-12, 1654 lb down and 82 lb up at 4-0-12, 1654 lb down and 82 lb up at 6-0-12, 1654 lb down and 82 lb up at 8-0-12, 1654 lb down and 82 lb up at 10-0-12, 1654 lb down and 82 lb up at 12-0-12, 1647 lb down and 82 lb up at 14-0-12, and 1647 lb down and 82 lb up at 15-11-12, and 1647 lb down and 82 lb up at 17-11-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

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, 3-5=-60, 10-13=-20
Concentrated Loads (lb)
Vert: 7=-1296 (B), 8=-1296 (B), 16=-1296 (B), 17=-1296 (B), 18=-1296 (B), 19=-1296 (B), 20=-1296 (B), 21=-1296 (B), 22=-1296 (B)

August 7,2025

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	M01GE	GABLE	1	1	Job Reference (optional)	I75459242

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:45 Page: 1
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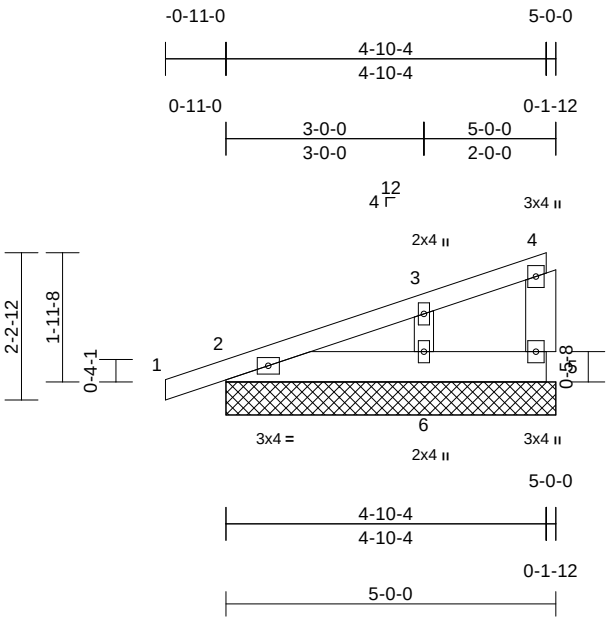

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	n/a	-	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 24 lb	FT = 25%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1
OTHERS 2x4 SP No.2

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

REACTIONS (size) 2=5-0-0, 5=5-0-0, 6=5-0-0
Max Horiz 2=94 (LC 8)
Max Uplift 2=-68 (LC 8), 5=-16 (LC 8), 6=-78 (LC 12)
Max Grav 2=164 (LC 1), 5=37 (LC 1), 6=236 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-143/51, 3-4=-26/7, 4-5=-29/62
BOT CHORD 2-6=0/0, 5-6=0/0
WEBS 3-6=-179/344

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 3-5-13, Exterior(2N) 3-5-13 to 4-9-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 5, 68 lb uplift at joint 2 and 78 lb uplift at joint 6.

LOAD CASE(S) Standard

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	M02	Monopitch	3	1	Job Reference (optional)	I75459243

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:45 Page: 1
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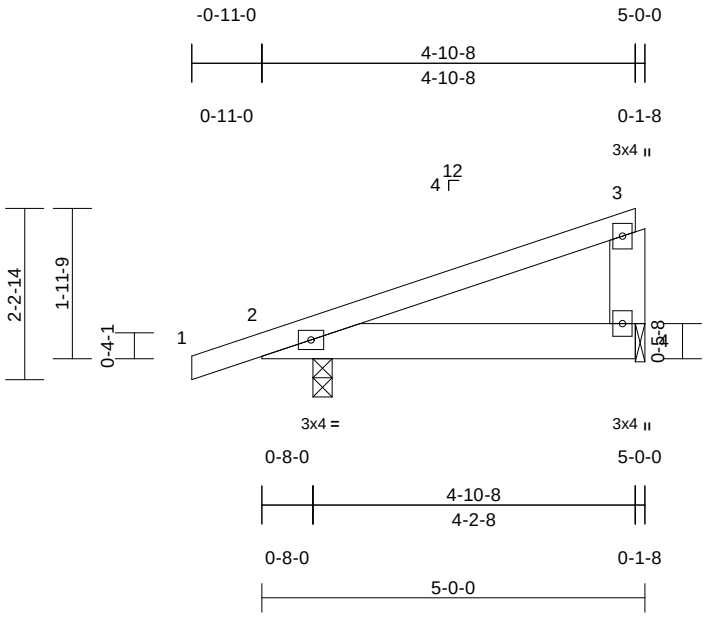

Scale = 1:30.1

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	0.10	Vert(LL)	0.01	4-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-AS							Weight: 24 lb	FT = 25%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1

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

REACTIONS (size) 2=0-3-0, 4=0-1-8
Max Horiz 2=68 (LC 8)
Max Uplift 2=-122 (LC 8), 4=-58 (LC 8)
Max Grav 2=301 (LC 1), 4=136 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-185/121, 3-4=-86/116
BOT CHORD 2-4=-110/190

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-11-0 to 3-5-13, Interior (1) 3-5-13 to 4-9-4 zone; cantilever left 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 30.0psf 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) 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 122 lb uplift at joint 2 and 58 lb uplift at joint 4.
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

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	V1	Valley	1	1	Job Reference (optional)	I75459244

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:45 Page: 1
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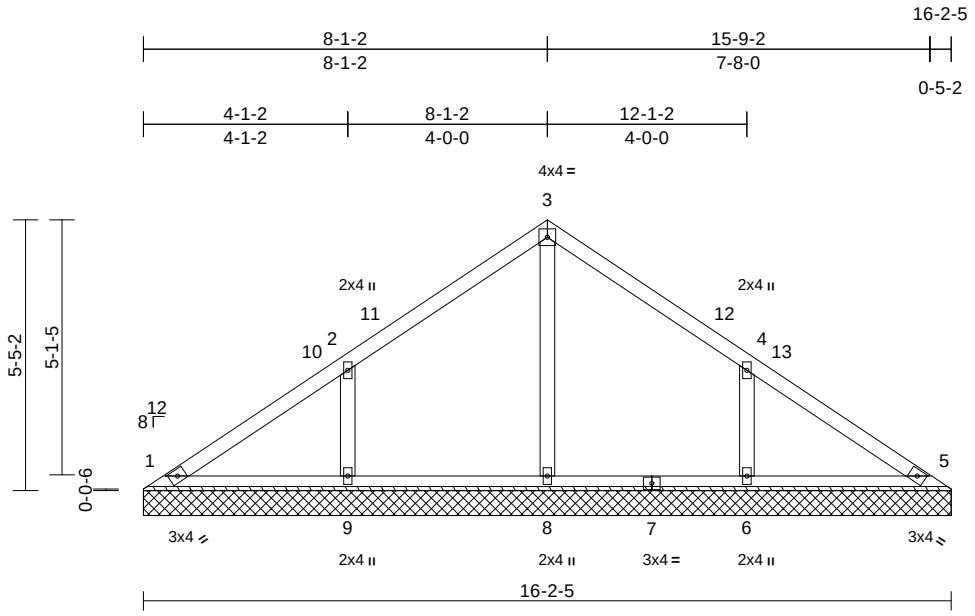

Scale = 1:46.2

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	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 65 lb	FT = 25%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.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) 1=16-2-5, 5=16-2-5, 6=16-2-5, 8=16-2-5, 9=16-2-5
Max Horiz 1=122 (LC 9)
Max Uplift 1=-3 (LC 13), 6=-109 (LC 13), 9=-109 (LC 12)
Max Grav 1=139 (LC 20), 5=132 (LC 1), 6=388 (LC 20), 8=244 (LC 1), 9=388 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-122/95, 2-3=-128/130, 3-4=-114/124, 4-5=-90/59
BOT CHORD 1-9=-36/73, 8-9=-36/73, 6-8=-36/73, 5-6=-36/73
WEBS 3-8=-169/0, 2-9=-296/220, 4-6=-296/220

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-5-15 to 4-10-12, Interior (1) 4-10-12 to 8-1-11, Exterior(2R) 8-1-11 to 12-6-8, Interior (1) 12-6-8 to 15-9-8 zone;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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 1, 109 lb uplift at joint 9 and 109 lb uplift at joint 6.

LOAD CASE(S) Standard

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	I75459245
250312-A	V2	Valley	1	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.20 S Jul 24 2025 Print: 25.2.0 S Jul 24 2025 MiTek Industries, Inc. Wed Aug 06 15:45:45 Page: 1
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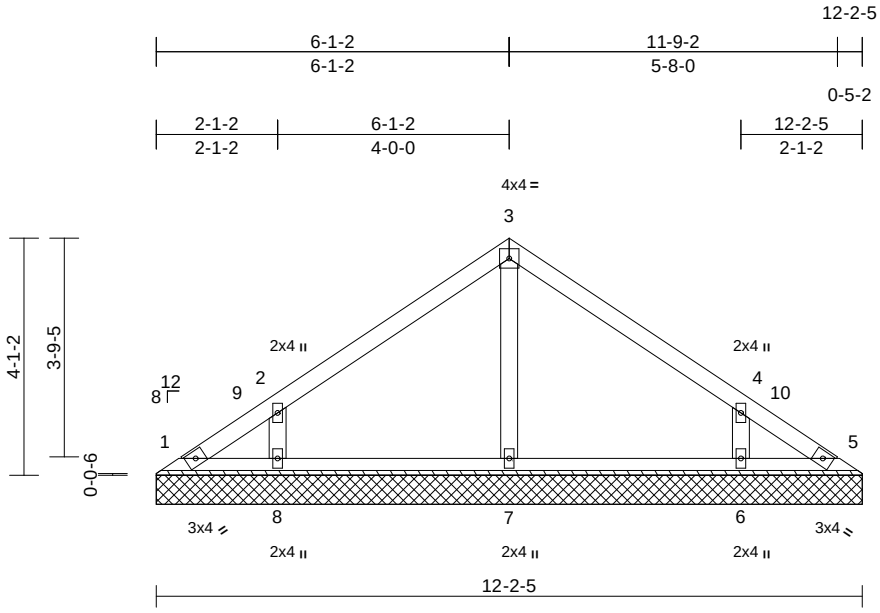

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 46 lb	FT = 25%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.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) 1=12-2-5, 5=12-2-5, 6=12-2-5, 7=12-2-5, 8=12-2-5
Max Horiz 1=-90 (LC 8)
Max Uplift 1=-28 (LC 10), 5=-10 (LC 11), 6=-93 (LC 13), 8=-93 (LC 12)
Max Grav 1=58 (LC 20), 5=45 (LC 19), 6=313 (LC 20), 7=264 (LC 1), 8=314 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-92/78, 2-3=-122/106, 3-4=-114/103, 4-5=-63/46
BOT CHORD 1-8=-22/52, 7-8=-22/52, 6-7=-22/52, 5-6=-22/52
WEBS 3-7=-178/43, 2-8=-252/229, 4-6=-252/229

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-5-15 to 4-10-12, Interior (1) 4-10-12 to 6-1-11, Exterior(2R) 6-1-11 to 10-6-8, Interior (1) 10-6-8 to 11-9-8 zone;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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 10 lb uplift at joint 5, 93 lb uplift at joint 8 and 93 lb uplift at joint 6.

LOAD CASE(S) Standard

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing	
250312-A	V3	Valley	1	1	Job Reference (optional)	I75459246

Comtech, Inc, Fayetteville, NC - 28314,

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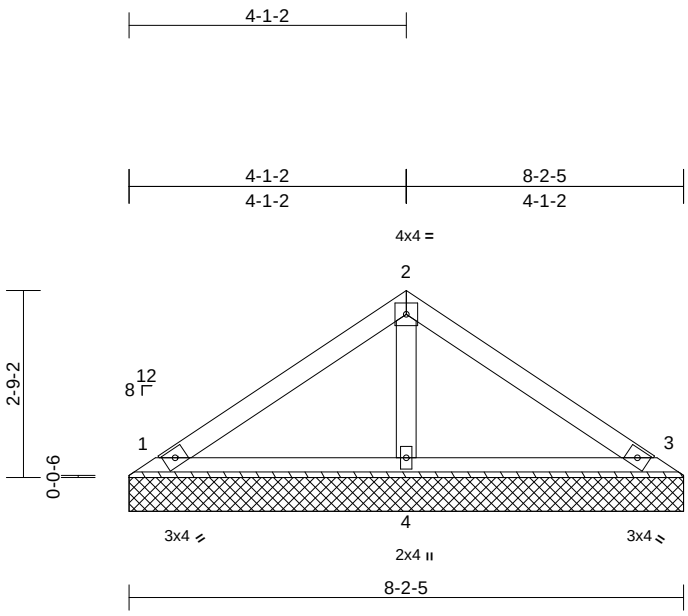

Scale = 1:34

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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 28 lb	FT = 25%

LUMBER

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
OTHERS	2x4 SP No.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) 1=8-2-5, 3=8-2-5, 4=8-2-5
Max Horiz 1=-59 (LC 8)
Max Uplift 1=-25 (LC 12), 3=-31 (LC 13)
Max Grav 1=159 (LC 1), 3=159 (LC 1), 4=266 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-96/68, 2-3=-88/68
BOT CHORD	1-4=-11/42, 3-4=-11/42
WEBS	2-4=-175/114

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1 and 31 lb uplift at joint 3.

LOAD CASE(S) Standard

August 7,2025

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

Job	Truss	Truss Type	Qty	Ply	102 Ducks Landing
250312-A	V4	Valley	1	1	I75459247
					Job Reference (optional)

Comtech, Inc, Fayetteville, NC - 28314,

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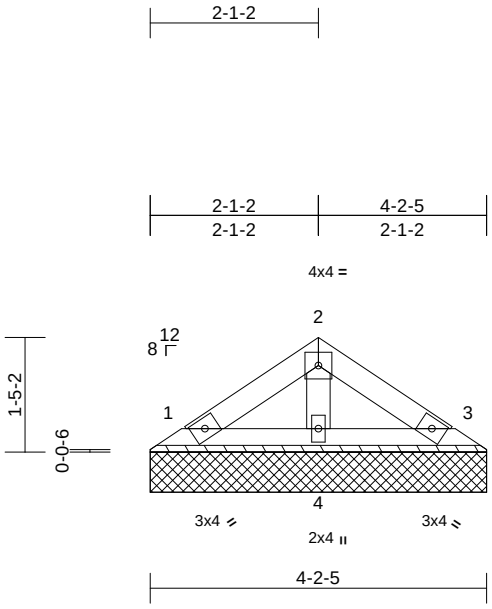


Scale = 1:28.7

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 13 lb	FT = 25%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-2-5, 3=4-2-5, 4=4-2-5
Max Horiz 1=27 (LC 11)
Max Uplift 1=-11 (LC 12), 3=-14 (LC 13)
Max Grav 1=72 (LC 1), 3=72 (LC 1), 4=120 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-44/37, 2-3=-40/37
BOT CHORD 1-4=-5/19, 3-4=-5/19
WEBS 2-4=-79/66

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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;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 30.0psf 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1 and 14 lb uplift at joint 3.

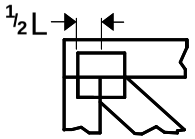
LOAD CASE(S) Standard

August 7,2025

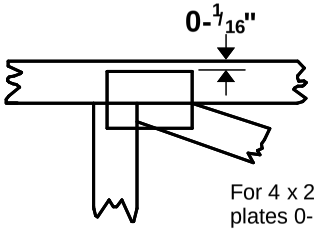
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

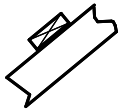
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

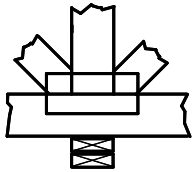
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

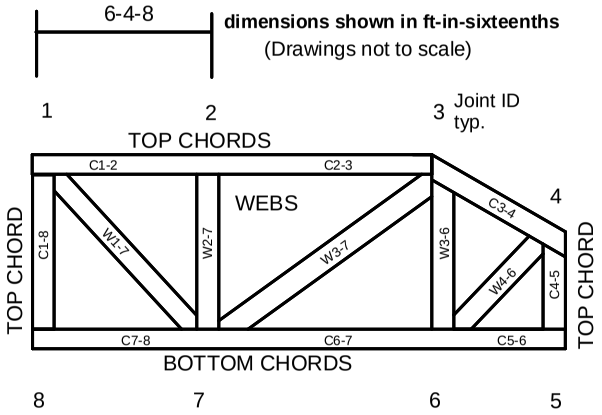


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.