

RE: P20-08023 - 475 McARTHUR RD

**Trenco**  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Project Customer:    Project Name:  
Lot/Block:                    Subdivision:  
Model:  
Address:  
City:                                State:

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

Design Code: IRC2018/TPI2014                    Design Program: MiTek 20/20 8.3  
Wind Code: N/A                    Wind Speed: 130 mph                    Design Method: User defined  
Roof Load: 40.0 psf                    Floor Load: N/A psf

Mean Roof Height (feet): 12                    Exposure Category: B

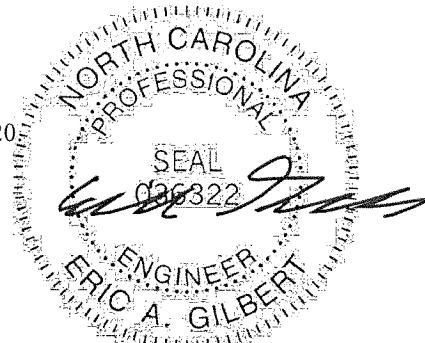
No.	Seal#	Truss Name	Date
1	E14797303	M01	8/28/20
2	E14797304	T01	8/28/20
3	E14797305	T01GE	8/28/20
4	E14797306	T01SGE	8/28/20
5	E14797307	T02	8/28/20
6	E14797308	T02GE	8/28/20
7	E14797309	T03	8/28/20
8	E14797310	T04	8/28/20
9		T05	8/28/20
10	E14797312	T06	8/28/20
11	E14797313	T07	8/28/20

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

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2020.

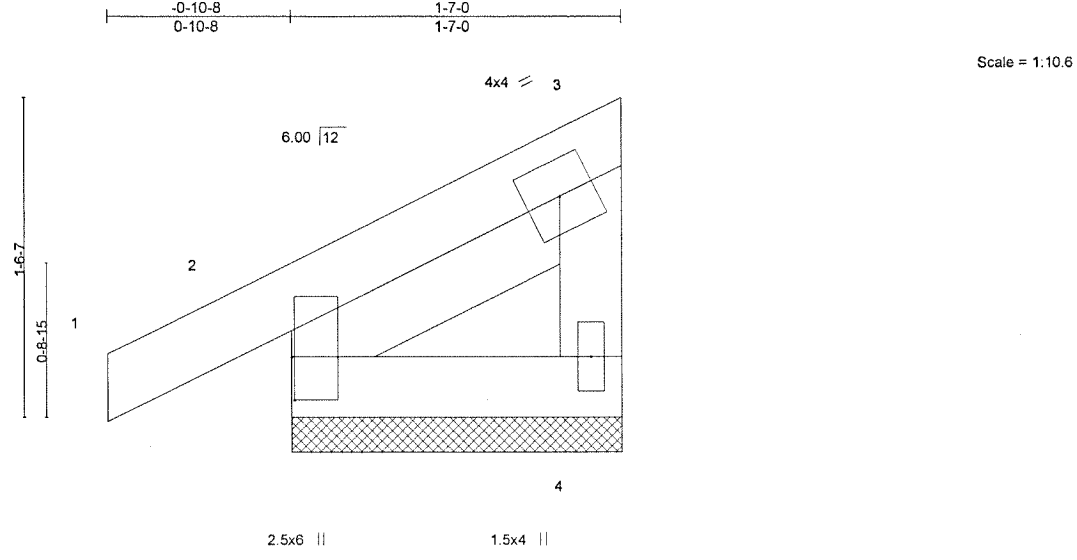
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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.



August 28, 2020

Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797303
P20-08023	M01	Monopitch Supported Gable	1	1		
Longleaf Truss Company, West End, NC - 27376,					Job Reference (optional)	

8.330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:37 2020 Page 1  
 ID:w2GdYv0to6hYYCPISh9TYyjN6N-Q0ILawH6wIKYzeF3EgIQI4ySYsbZjHgLL374I4yjMQS



LOADING (psf)		SPACING-		CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	2-0-0	Plate Grip DOL	TC	Vert(LL)	0.00	1	n/r	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	1.15	Lumber DOL	BC	Vert(CT)	-0.00	1	n/r		
TCDL	10.0	1.15	Rep Stress Incr	WB	Horz(CT)	-0.00	4	n/a		
BCLL	0.0	YES	Code IRC2018/TPI2014	Matrix-P					Weight: 10 lb	FT = 20%
BCDL	10.0									

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.1	TOP CHORD	Sheathed or 1-7-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3		
SLIDER	Left 2x4 SP No.3 -x 1-6-0		

**REACTIONS.** (size) 4=1-7-0, 2=1-7-0  
 Max Horz 2=35(LC 9)  
 Max Uplift 4=-9(LC 9), 2=-26(LC 12)  
 Max Grav 4=46(LC 24), 2=126(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - 6) Gable requires continuous bottom chord bearing.
  - 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 4, 2.
  - 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.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797304
P20-08023	T01	Common	11	1		
Longleaf Truss Company, West End, NC - 27376.					Job Reference (optional)	

8 330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:40 2020 Page 1  
 ID:w2GdYv0to6hYYCPIsh9TYyjN6N-rbRTCyK?DDI6q5\_evor7MjaqA3W0wZwrnmzlyAPyjMQP  
 15-6-0 7-7-4 22-2-8 6-8-8

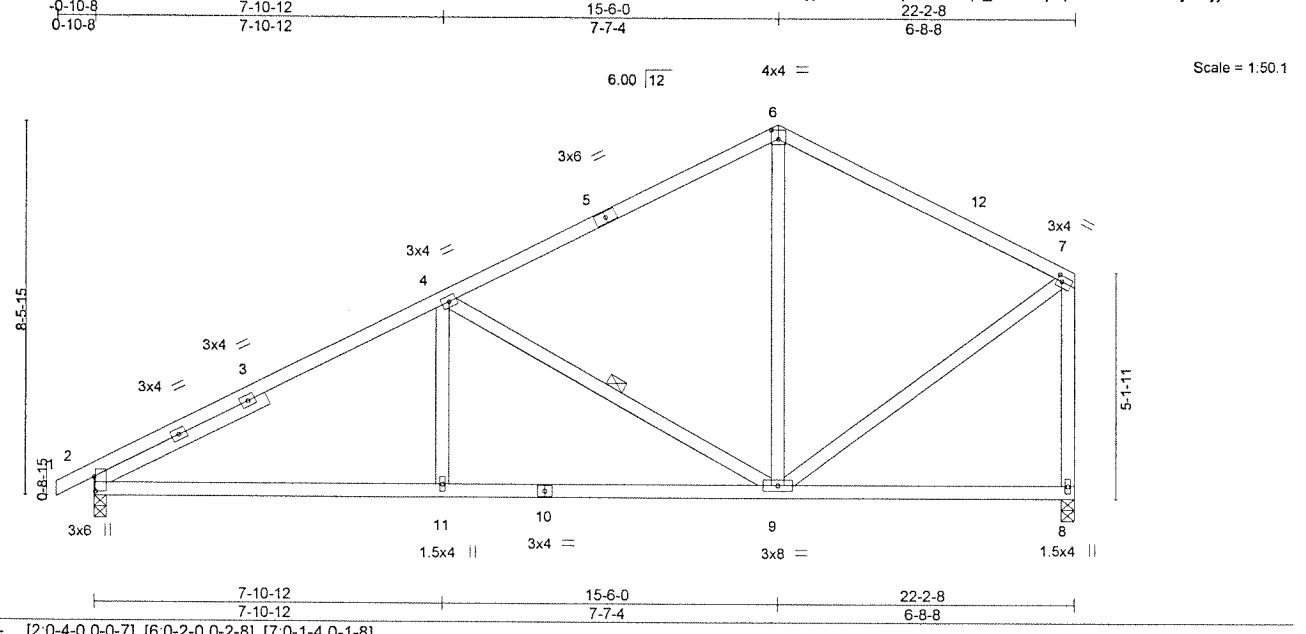


Plate Offsets (X,Y)--	[2:0-4-0,0-0-7], [6:0-2-0,0-2-8], [7:0-1-4,0-1-8]
LOADING (psf)	
TCLL (roof)	20.0
Snow (Pf/Pg)	11.6/15.0
TCDL	10.0
BCLL	0.0
BCDL	10.0
SPACING-	2-0-0
Plate Grip DOL	1.15
Lumber DOL	1.15
Rep Stress Incr	YES
Code IRC2018/TPI2014	
CSI.	
TC	0.59
BC	0.45
WB	0.29
Matrix-S	
DEFL.	
in (loc)	l/defl
Vert(LL)	-0.08 2-11 >999 240
Vert(CT)	-0.18 2-11 >999 180
Horz(CT)	0.02 8 n/a n/a
PLATES	GRIP
MT20	244/190
Weight: 127 lb	FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.1	TOP CHORD	Sheathed or 5-3-15 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3	WEBS	1 Row at midpt 4-9
SLIDER	Left 2x4 SP No.3 -x 4-4-11		

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=205(LC 11)  
 Max Uplift 2=-19(LC 12), 8=-2(LC 12)  
 Max Grav 2=936(LC 2), 8=881(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1348/28, 4-6=-699/76, 6-7=-671/76, 7-8=-824/36  
 BOT CHORD 2-11=0/1110, 9-11=0/1110  
 WEBS 4-11=0/329, 4-9=-689/64, 6-9=0/259, 7-9=0/629

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 8.
  - 9) 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.



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Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797305
P20-08023	T01GE	Common Supported Gable	1	1		
Longleaf Truss Company, West End, NC - 27376.			Job Reference (optional)			

8.330 s Jul 22 2020 MITek Industries, Inc. Fri Aug 28 09:25:43 2020 Page 1  
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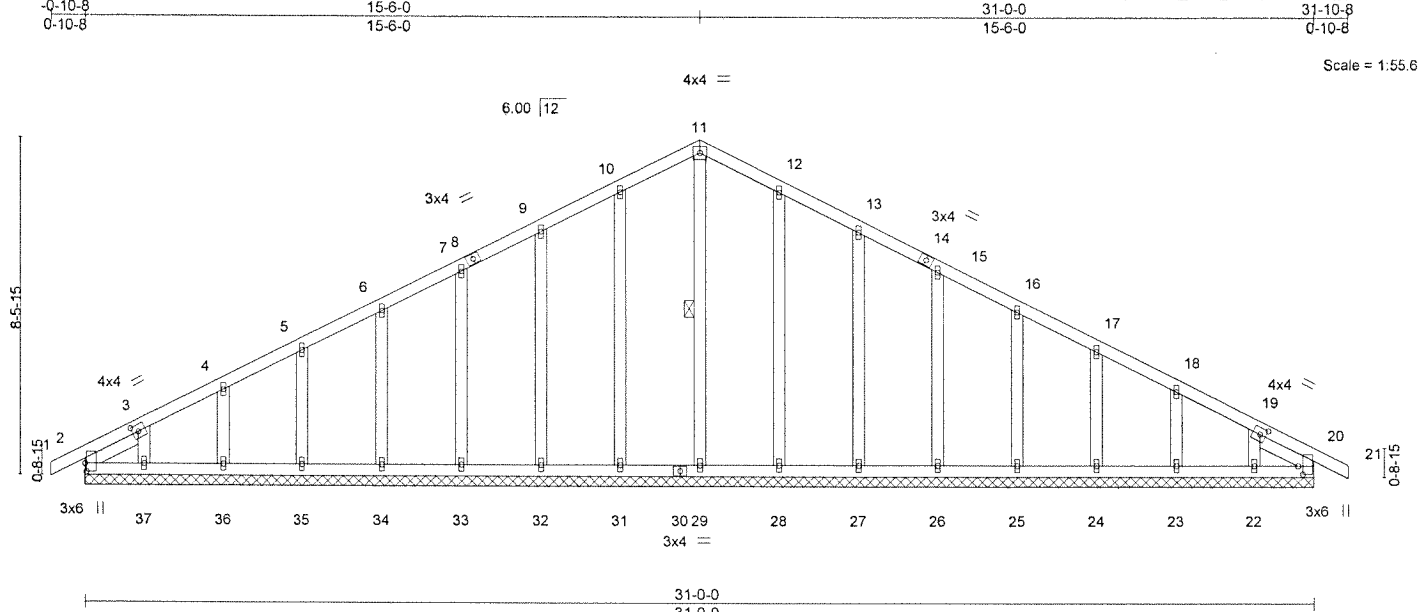


Plate Offsets (X,Y)--	[2:0-2-8,0-0-7], [3:0-1-13,0-2-0], [19:0-1-13,0-2-0], [20:0-2-8,0-1-7]
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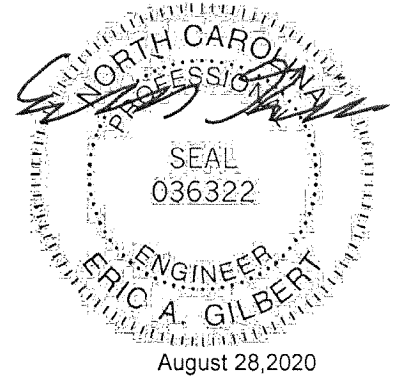
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.04	Vert(LL) -0.00	20	n/r	120	MT20	244/190	
Snow (Pf/Pg) 11.6/15.0	Lumber DOL 1.15	BC 0.02	Vert(CT) -0.00	20	n/r	120			
TCDL 10.0	Rep Stress Incr YES	WB 0.15	Horz(CT) 0.00	20	n/a	n/a			
BCLL 0.0	Code IRC2018/TPI2014	Matrix-S					Weight: 200 lb	FT = 20%	
BCDL 10.0									

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 11-29
SLIDER Left 2x4 SP No.3 -x 1-6-13, Right 2x4 SP No.3 -x 1-6-13	

**REACTIONS.** All bearings 31-0-0.  
 (lb) - Max Horz 2=-149(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 31, 32, 33, 34, 35, 36, 37, 28, 27, 26, 25, 24, 23, 22  
 Max Grav All reactions 250 lb or less at joint(s) 2, 29, 31, 32, 33, 34, 35, 36, 37, 28, 27, 26, 25, 24, 23, 22, 20

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=31ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 31, 32, 33, 34, 35, 36, 37, 28, 27, 26, 25, 24, 23, 22.
  - 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.



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Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797306
P20-08023	T01SGE	GABLE	1	1		
Longleaf Truss Company, West End, NC - 27376.						Job Reference (optional)

8:330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:47 2020 Page 1  
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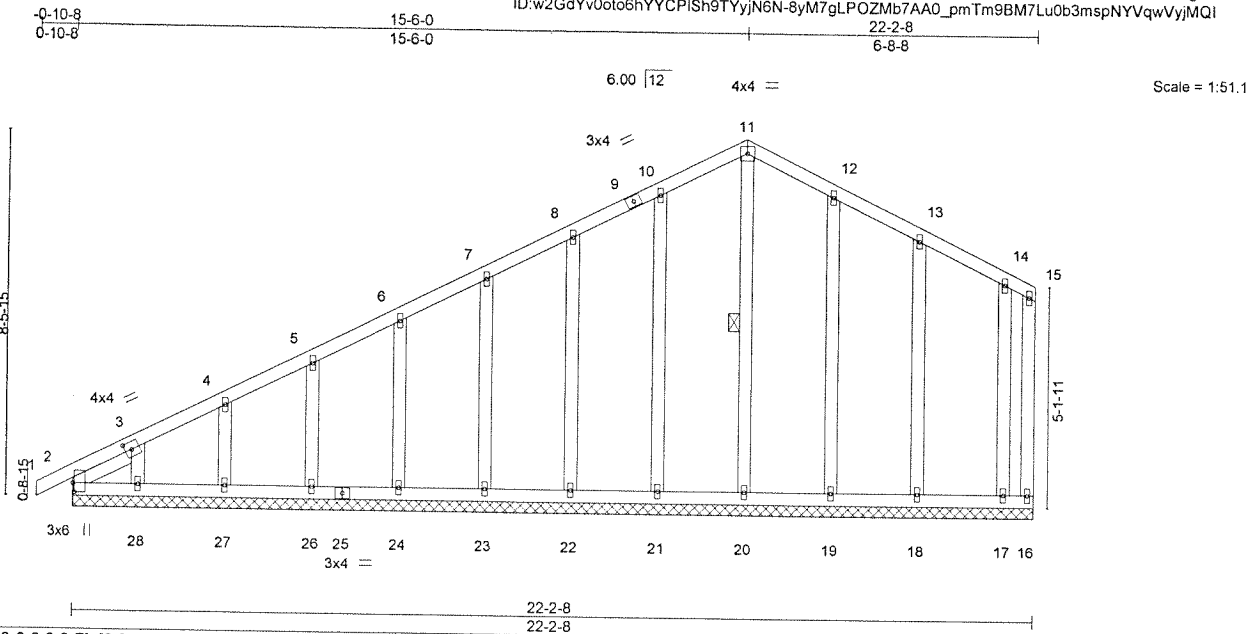


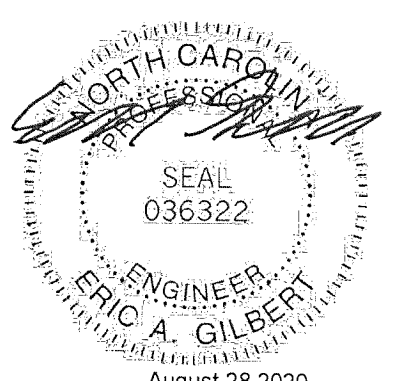
Plate Offsets (X,Y)- [2:0-2-8,0-0-7], [3:0-1-13,0-2-0]	
<b>LOADING (psf)</b>	<b>SPACING-</b> 2-0-0
TCLL (roof) 20.0	Plate Grip DOL 1.15
Snow (Pf/Pg) 11.6/15.0	Lumber DOL 1.15
TCDL 10.0	Rep Stress Incr YES
BCLL 0.0 *	Code IRC2018/TPI2014
BCDL 10.0	
<b>CSI.</b>	<b>DEFL.</b>
TC 0.14	in (loc) l/defl L/d
BC 0.03	Vert(LL) -0.00 1 n/r 120
WB 0.15	Vert(CT) -0.00 1 n/r 120
Matrix-S	Horz(CT) -0.00 16 n/a n/a
<b>PLATES</b>	<b>GRIP</b>
MT20	244/190
Weight: 160 lb FT = 20%	

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 11-20
OTHERS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 -x 1-6-13	

**REACTIONS.** All bearings 22-2-8.  
 (lb) - Max Horz 2=205(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 21, 22, 23, 24, 26, 27, 28, 19, 18, 17  
 Max Grav All reactions 250 lb or less at joint(s) 2, 16, 20, 21, 22, 23, 24, 26, 27, 28, 19, 18, 17

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 16, 21, 22, 23, 24, 26, 27, 28, 19, 18, 17.
  - 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.



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

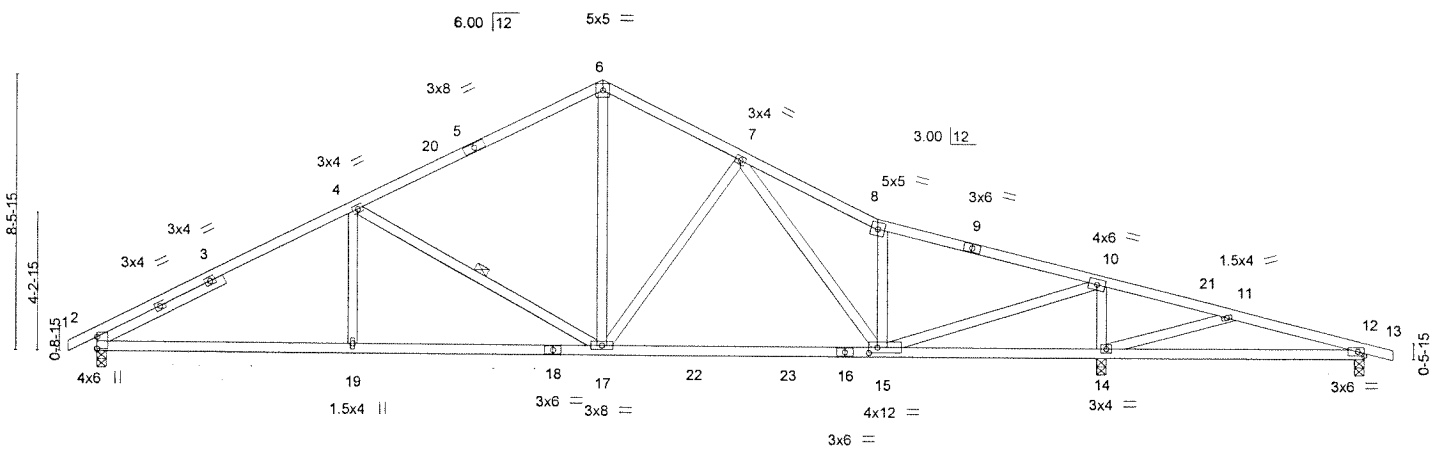
Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797307
P20-08023	T02	Roof Special	16	1		
Longleaf Truss Company, West End, NC - 27376,						Job Reference (optional)

ID:w2GdYv0oto6hYYCPISh9TYyJN6N-0jbdWjSubb5ZenKI2cYiJ1XfHVDy?OZPHAT13GyjMQE

8.330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:51 2020 Page 1

0-10-8 7-10-12 15-6-0 19-9-0 24-0-0 30-10-4 34-8-12 39-0-0 39-10-8  
0-10-8 7-10-12 7-7-4 4-3-0 4-3-0 6-10-4 3-10-8 4-3-4 0-10-8

Scale = 1:67.8



7-10-12	15-6-0	24-0-0	30-10-4	39-0-0
7-10-12	7-7-4	8-6-0	6-10-4	8-1-12

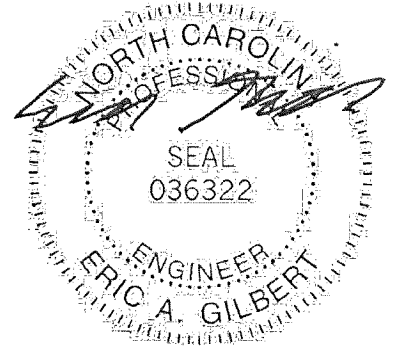
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.79	in (loc)	l/def	L/d	MT20	244/190	
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.65	Vert(LL)	-0.22	15-17	>999	240	
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Vert(CT)	-0.39	15-17	>958	180	
BCLL	0.0	Code IRC2018/TPI2014		Matrix-S		Horz(CT)	0.05	14	n/a	n/a	
BCDL	10.0									Weight: 207 lb FT = 20%	

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SP No.1	TOP CHORD	Sheathed or 3-7-0 oc purlins.
BOT CHORD	2x4 SP No.1	BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	2x4 SP No.3	WEBS	1 Row at midpt 4-17
SLIDER	Left 2x4 SP No.3 -x 4-4-11		

**REACTIONS.** (size) 2=0-3-8, 14=0-3-8, 12=0-3-8  
Max Horz 2=-144(LC 10)  
Max Uplift 2=-21(LC 12), 12=-26(LC 12)  
Max Grav 2=1371(LC 24), 14=2001(LC 25), 12=199(LC 39)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2135/33, 4-6=-1437/77, 6-7=-1406/85, 7-8=-1774/81, 8-10=-1604/25, 10-11=-1/709, 11-12=0/321  
BOT CHORD 2-19=0/1905, 17-19=0/1905, 15-17=0/1401, 14-15=-659/35, 12-14=-281/0  
WEBS 4-19=0/314, 4-17=-744/70, 6-17=0/908, 7-17=-363/72, 7-15=-9/303, 8-15=-673/90, 10-15=0/2279, 10-14=-1608/75, 11-14=-427/57

- 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=12ft; B=45ft; L=39ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.
  - 9) 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.



August 28, 2020

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>ENGINEERING BY</p> <p><b>TRENCO</b></p> <p>A MITEK AFFILIATE</p> <p>818 Soundside Road Edenton, NC 27932</p>
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Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797308
P20-08023	T02GE	Common Supported Gable	1	1		
Langleaf Truss Company, West End, NC - 27376,						Job Reference (optional)

8.330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:53 2020 Page 1  
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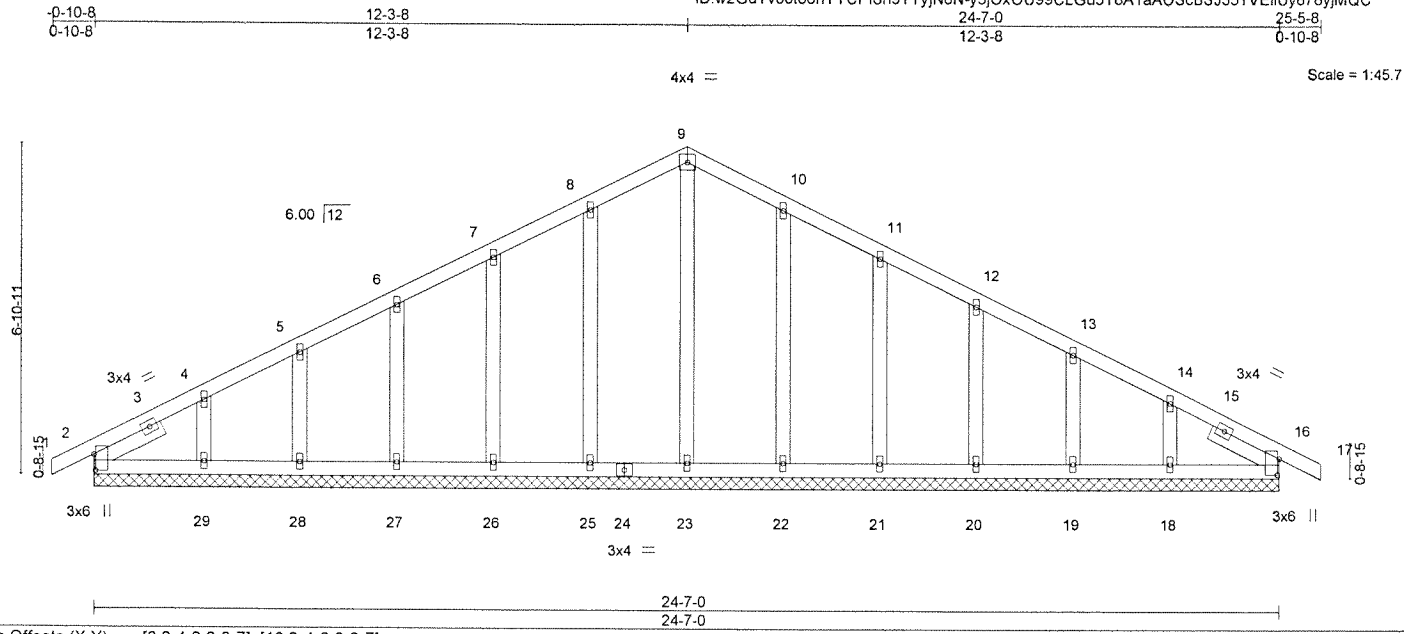


Plate Offsets (X,Y)-- [2:0-4-0,0-0-7], [16:0-4-0,0-0-7]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.04	Vert(LL)	-0.00	16	n/r	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.03	Vert(CT)	-0.00	16	n/r		
TCDL 10.0	Lumber DOL 1.15	WB 0.09	Horz(CT)	0.00	16	n/a		
BCLL 0.0	Rep Stress Incr YES	Matrix-S						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 145 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 OTHERS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -x 1-7-1, Right 2x4 SP No.3 -x 1-7-1

**BRACING-**  
 TOP CHORD Sheathed or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 24-7-0.  
 (lb) - Max Horz 2=114(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 22, 21, 20, 19, 18  
 Max Grav All reactions 250 lb or less at joint(s) 2, 23, 25, 26, 27, 28, 29, 22, 21, 20, 19, 18, 16

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=25ft; eave=2ft; Cat. II, Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL; Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 25, 26, 27, 28, 29, 22, 21, 20, 19, 18.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 16.
  - 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.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ENGINEERING BY**  
**TRENCO**  
 A MI-T-K AFFILIATE  
 818 Soundside Road  
 Edenton, NC 27932

Job P20-08023	Truss T03	Truss Type GABLE	Qty 1	Ply 1	475 McARTHUR RD	E14797309
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Longleaf Truss Company, West End, NC - 27376, 8.330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:57 2020 Page 1  
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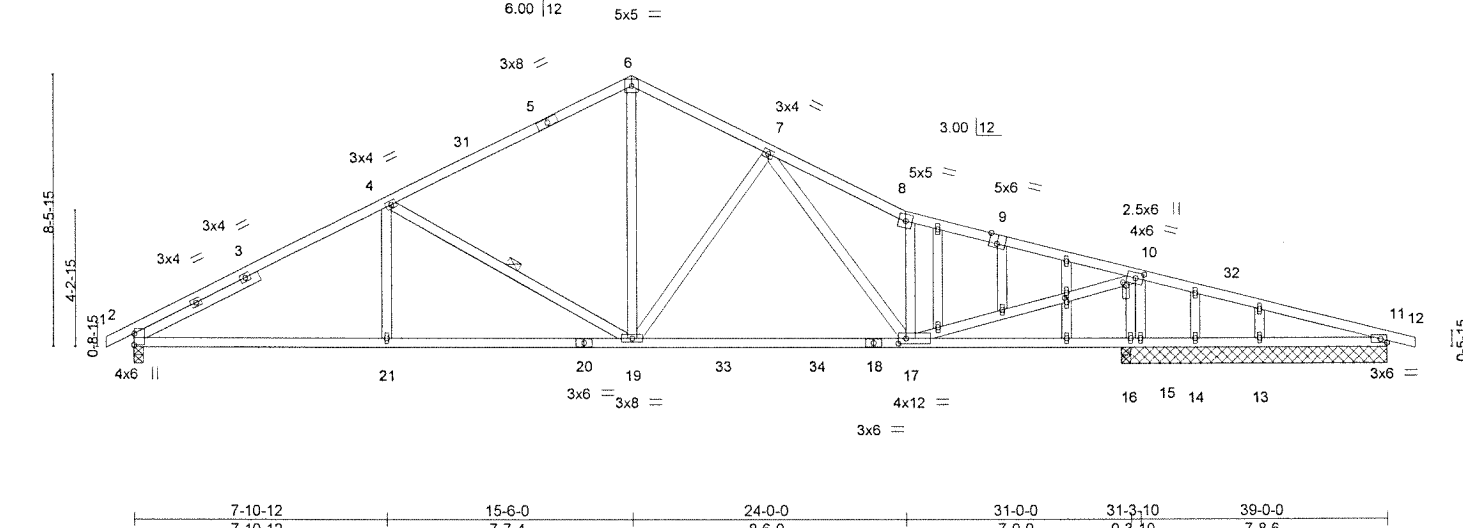
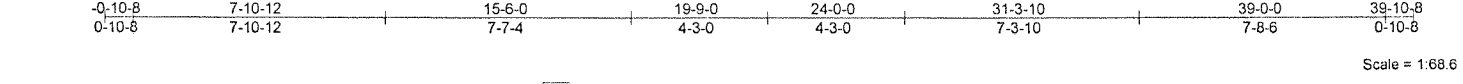


Plate Offsets (X,Y)-- [9:0-0-0,0-1-12], [9:0-3-0,Edge], [10:0-1-4,0-1-4], [10:0-2-12,0-2-0], [17:0-2-12,0-2-0], [26:0-1-10,0-0-12], [28:0-1-13,0-0-0]

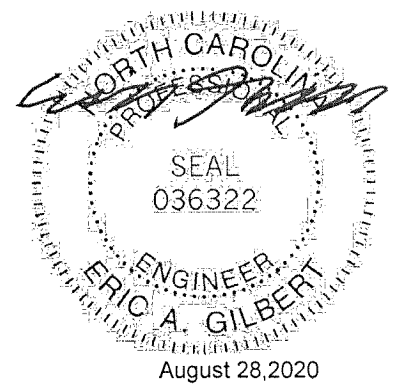
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.80	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.66	Vert(LL) -0.22 17-19 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.93	Vert(CT) -0.40 17-19 >931 180		
BCLL 0.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.05 16 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 218 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1	TOP CHORD Sheathed or 3-4-5 oc purlins.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 4-19
OTHERS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 -x 4-4-11	

**REACTIONS.** All bearings 8-3-8 except (jt=length) 2=0-3-8.  
 (lb) - Max Horz 2=144(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 11 except 15=172(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 13, 14, 11 except 2=1402(LC 24), 15=1292(LC 2), 16=576(LC 7), 16=361(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2199/33, 4-6=-1506/77, 6-7=-1473/86, 7-8=-2002/80, 8-10=-1820/24, 10-11=0/533  
 BOT CHORD 2-21=0/1960, 19-21=0/1960, 17-19=0/1505, 16-17=-459/13, 15-16=-459/13, 14-15=-459/13, 13-14=-459/13, 11-13=-459/13  
 WEBS 4-21=0/314, 4-19=-739/69, 6-19=0/969, 7-19=-443/72, 7-17=-8/453, 8-17=-718/89, 10-17=0/2260, 10-15=-1654/87

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=39ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Min. flat roof snow load governs.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - All plates are 1.5x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14, 11 except (jt=lb) 15=172.
  - 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.



<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b>          Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>ENGINEERING BY  <b>TRENCO</b>          A MITEK COMPANY</p> <p>818 Soundside Road          Edenton, NC 27932</p>
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Job P20-08023	Truss T04	Truss Type Common	Qty 6	Ply 1	475 McARTHUR RD E14797310
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Longleaf Truss Company, West End, NC - 27376, 8.330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:25:59 2020 Page 1  
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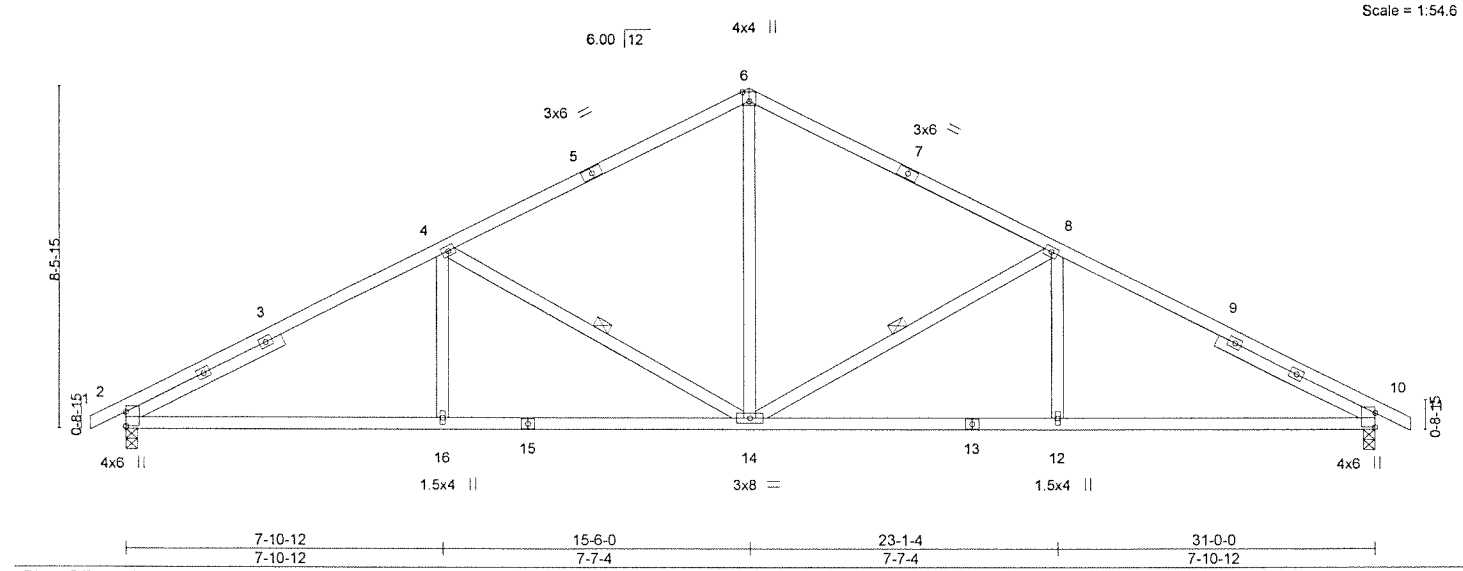
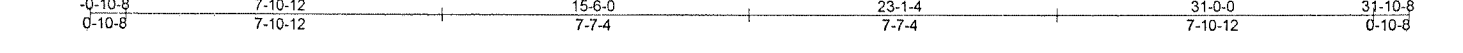


Plate Offsets (X,Y)-- [6:0-2-12,0-2-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.70	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.51	Vert(LL) -0.09 2-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.32	Vert(CT) -0.21 2-16 >999 180		
BCLL 0.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.08 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 163 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -x 4-4-11, Right 2x4 SP No.3 -x 4-4-11

**BRACING-**  
 TOP CHORD Sheathed or 3-6-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 8-14, 4-14

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
 Max Horz 2=149(LC 11)  
 Max Uplift 2=-21(LC 12), 10=-21(LC 12)  
 Max Grav 2=1293(LC 2), 10=1293(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2067/31, 4-6=-1453/79, 6-8=-1453/79, 8-10=-2067/31  
 BOT CHORD 2-16=0/1738, 14-16=0/1738, 12-14=0/1738, 10-12=0/1738  
 WEBS 6-14=0/765, 8-14=-650/65, 8-12=0/325, 4-14=-650/65, 4-16=0/325

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=31ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - 6) All plates are 3x4 MT20 unless otherwise indicated.
  - 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 10.
  - 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.



Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797311
P20-08023	T05	Common	3	1		

Longleaf Truss Company, West End, NC - 27376, 8 330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:26:01 2020 Page 1  
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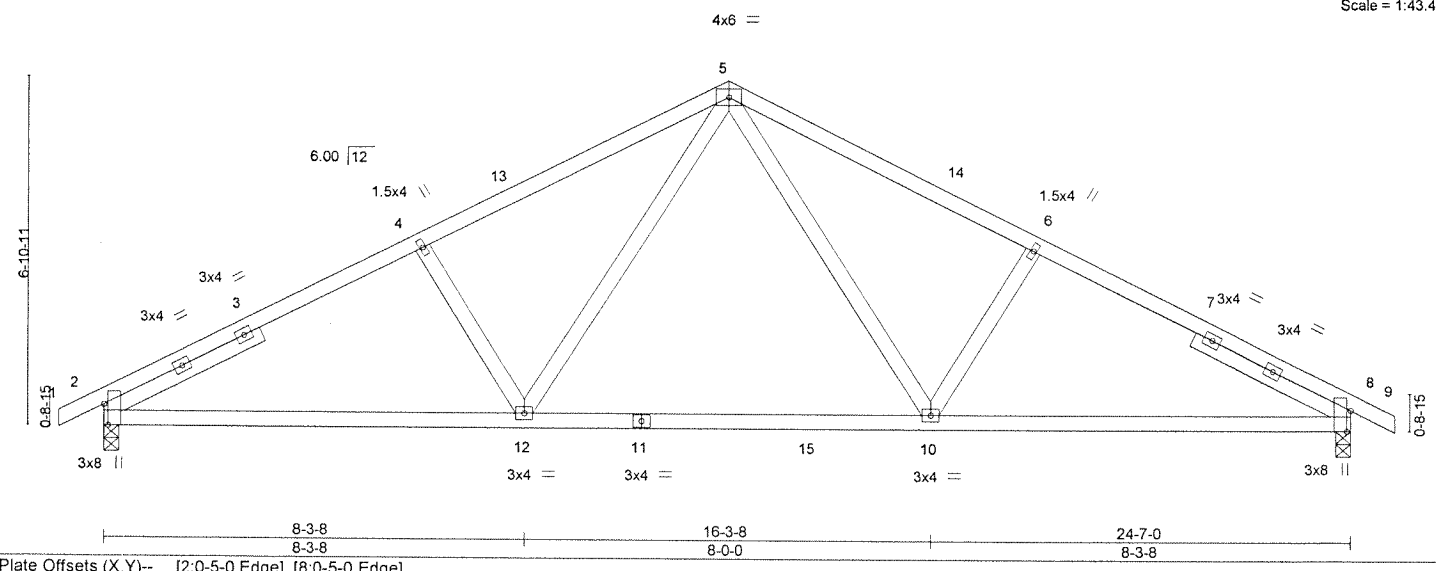


Plate Offsets (X,Y)--	[2:0-5-0,Edge], [8:0-5-0,Edge]							
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.46	Vert(LL) -0.13	10-12	>999	240	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Lumber DOL 1.15	BC 0.59	Vert(CT) -0.22	2-12	>999	180		
TCDL 10.0	Rep Stress Incr YES	WB 0.25	Horz(CT) 0.05	8	n/a	n/a		
BCLL 0.0	Code IRC2018/TPI2014	Matrix-S					Weight: 125 lb	FT = 20%
BCDL 10.0								

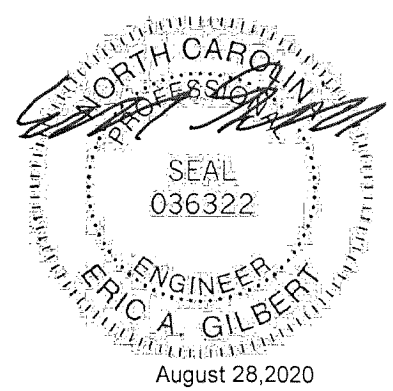
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -x 3-6-0, Right 2x4 SP No.3 -x 3-6-0

**BRACING-**  
 TOP CHORD Sheathed or 4-7-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8  
 Max Horz 2=-114(LC 10)  
 Max Uplift 2=-21(LC 12), 8=-21(LC 12)  
 Max Grav 2=1148(LC 24), 8=1148(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1723/42, 4-5=-1571/67, 5-6=-1571/67, 6-8=-1722/42  
 BOT CHORD 2-12=0/1529, 10-12=0/1058, 8-10=0/1443  
 WEBS 5-10=0/648, 6-10=-302/107, 5-12=0/649, 4-12=-302/107

- 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=12ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.
  - 9) 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.

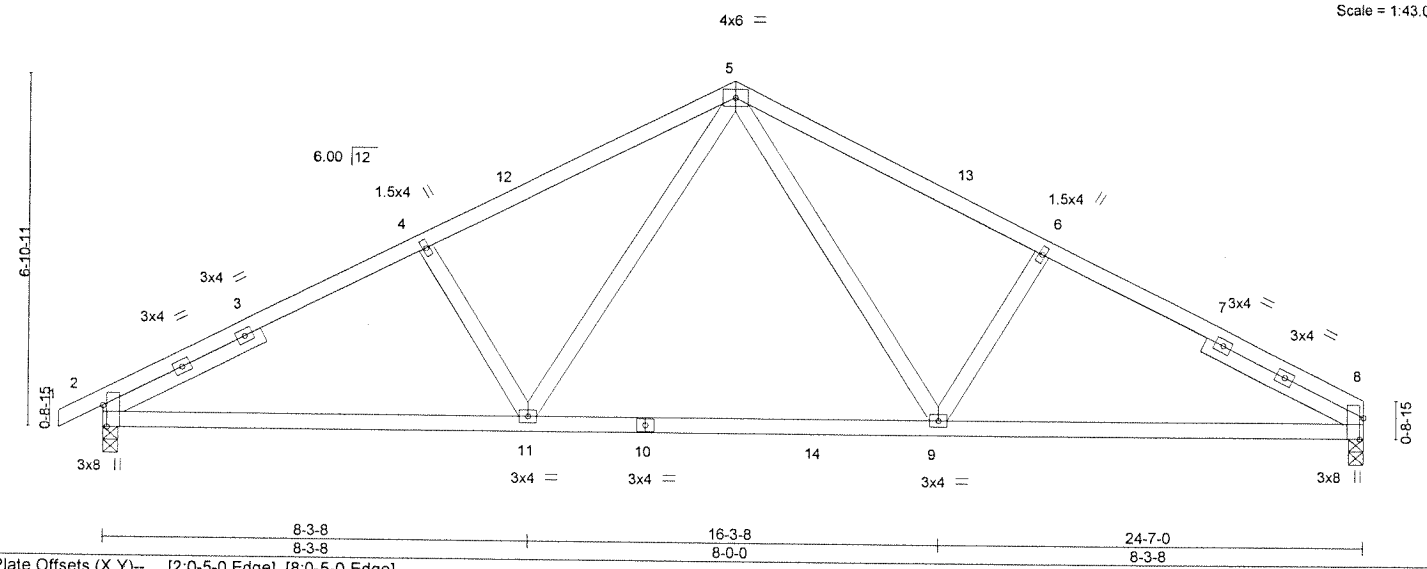
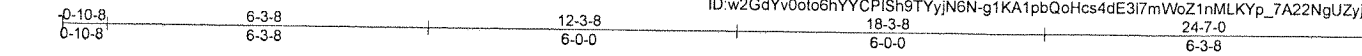


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**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797312
P20-08023	T06	Common	8	1		
Longleaf Truss Company, West End, NC - 27376.						Job Reference (optional)

8.330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:26:03 2020 Page 1  
 ID:w2GdYv0to6hYYCPIsh9TYyJN6N-g1KA1pbQoHcs4dE3i7mVwZ1nMLKyp\_7A22NgUzYjMQ2



LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL (roof)	20.0	2-0-0	TC	0.46	in (loc)	l/defl	L/d	MT20	244/190		
Snow (P/Pg)	11.6/15.0	Plate Grip DOL	1.15	BC	0.60	Vert(LL)	-0.13 9-11 >999	240			
TCDL	10.0	Lumber DOL	1.15	WB	0.26	Vert(CT)	-0.23 8-9 >999	180			
BCLL	0.0 *	Rep Stress Incr	YES	Matrix-S			Horz(CT)	0.05 8 n/a n/a			
BCDL	10.0	Code	IRC2018/TPI2014								
										Weight: 123 lb	FT = 20%

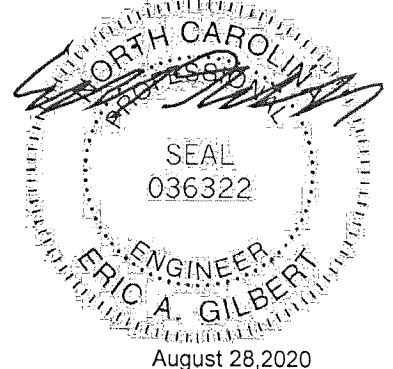
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -x 3-6-0, Right 2x4 SP No.3 -x 3-6-0

**BRACING-**  
 TOP CHORD Sheathed or 4-6-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 8=0-3-8, 2=0-3-8  
 Max Horz 2=114(LC 11)  
 Max Uplift 2=22(LC 12)  
 Max Grav 8=1100(LC 25), 2=1148(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1724/43, 4-5=-1572/68, 5-6=-1575/69, 6-8=-1727/44  
 BOT CHORD 2-11=0/1530, 9-11=0/1059, 8-9=0/1447  
 WEBS 5-9=0/652, 6-9=-304/109, 5-11=0/648, 4-11=-302/107

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MVFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.
  - 9) 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.

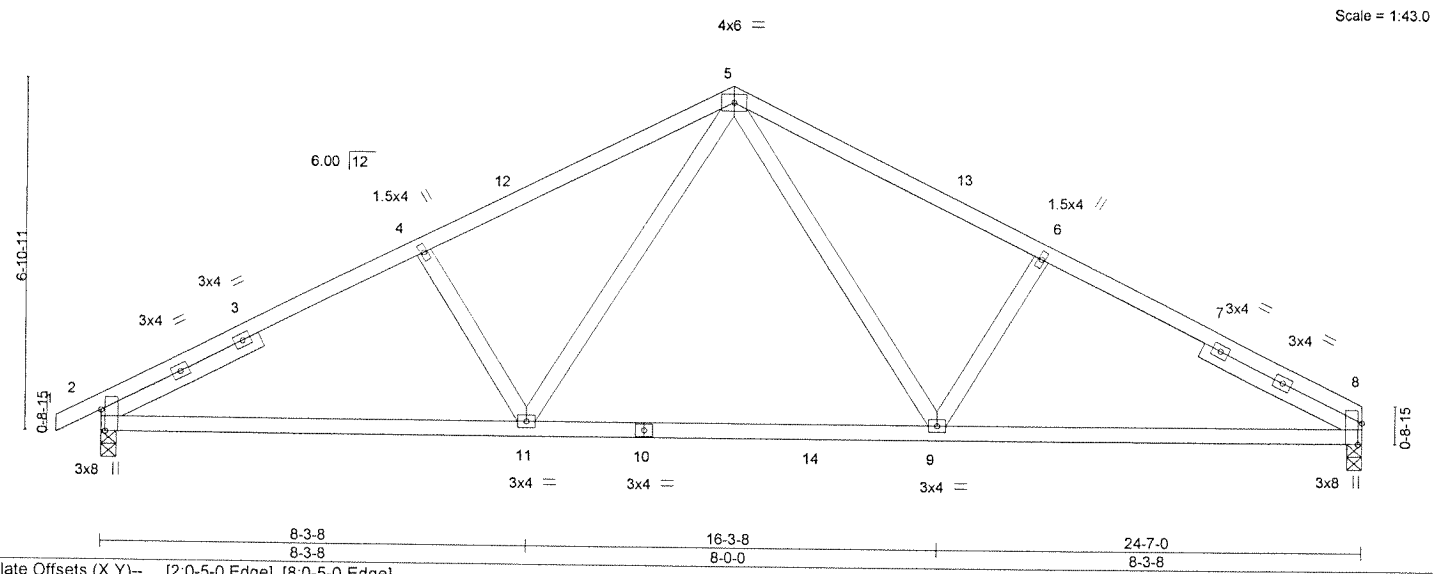


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**ENGINEERING BY**  
**TRENCO**  
 A MITEK COMPANY  
 818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	475 McARTHUR RD	E14797313
P20-08023	T07	Common	1	1		

Longleaf Truss Company, West End, NC - 27376, 8-330 s Jul 22 2020 MiTek Industries, Inc. Fri Aug 28 09:26:04 2020 Page 1  
 ID:w2GdYvOto6hYYCPISh9TYyjN6N-8DuYF9c2ZbkiinpFJrHLnZy6kgnYRNJHI6D00yMQ1  
 Job Reference (optional)



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)	-0.13	9-11	>999	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Lumber DOL	1.15	BC 0.60	Vert(CT)	-0.23	8-9	>999		
TCDL 10.0	Rep Stress Incr	YES	WB 0.26	Horz(CT)	0.05	8	n/a		
BCLL 0.0	Code IRC2018/TPI2014		Matrix-S					Weight: 123 lb	FT = 20%
BCDL 10.0									

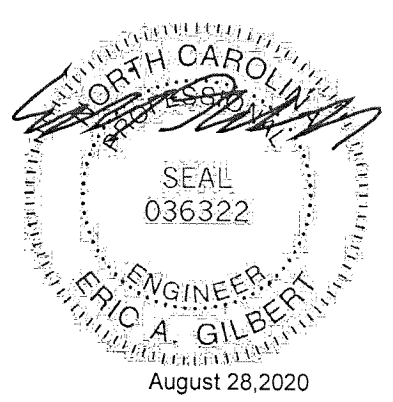
**LUMBER-**  
 TOP CHORD 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 -x 3-6-0, Right 2x4 SP No.3 -x 3-6-0

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 TOP CHORD Sheathed or 4-6-15 oc purlins.  
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**REACTIONS.** (size) 8=0-3-8, 2=0-3-8  
 Max Horz 2=114(LC 11)  
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**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
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- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=12ft; B=45ft; L=25ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
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  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.
  - 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.

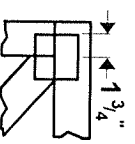


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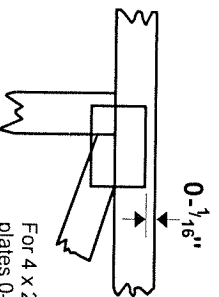
**ENGINEERING BY**  
**TRENCO**  
 A MiTek Alliance  
 818 Soundside Road  
 Edenton, NC 27932

## 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 4 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.



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

\* Plate location details available in **MITek 2020 software** or upon request.

### PLATE SIZE

**4 X 4**

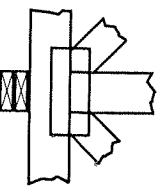
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

### LATERAL BRACING LOCATION



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

### BEARING



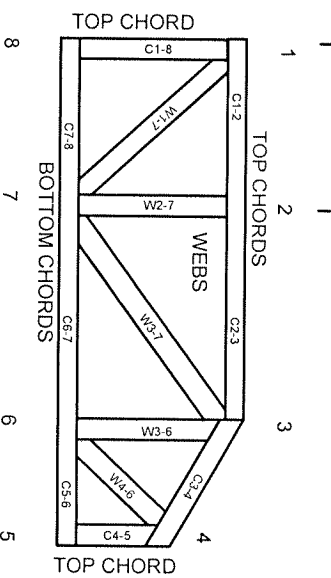
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

## Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



**JOINTS ARE GENERALLY NUMBERED/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-1311, ESR-1352, ESR1988  
ER-3907, ESR-2382, ESR-1397, ESR-3282

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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## General Safety Notes

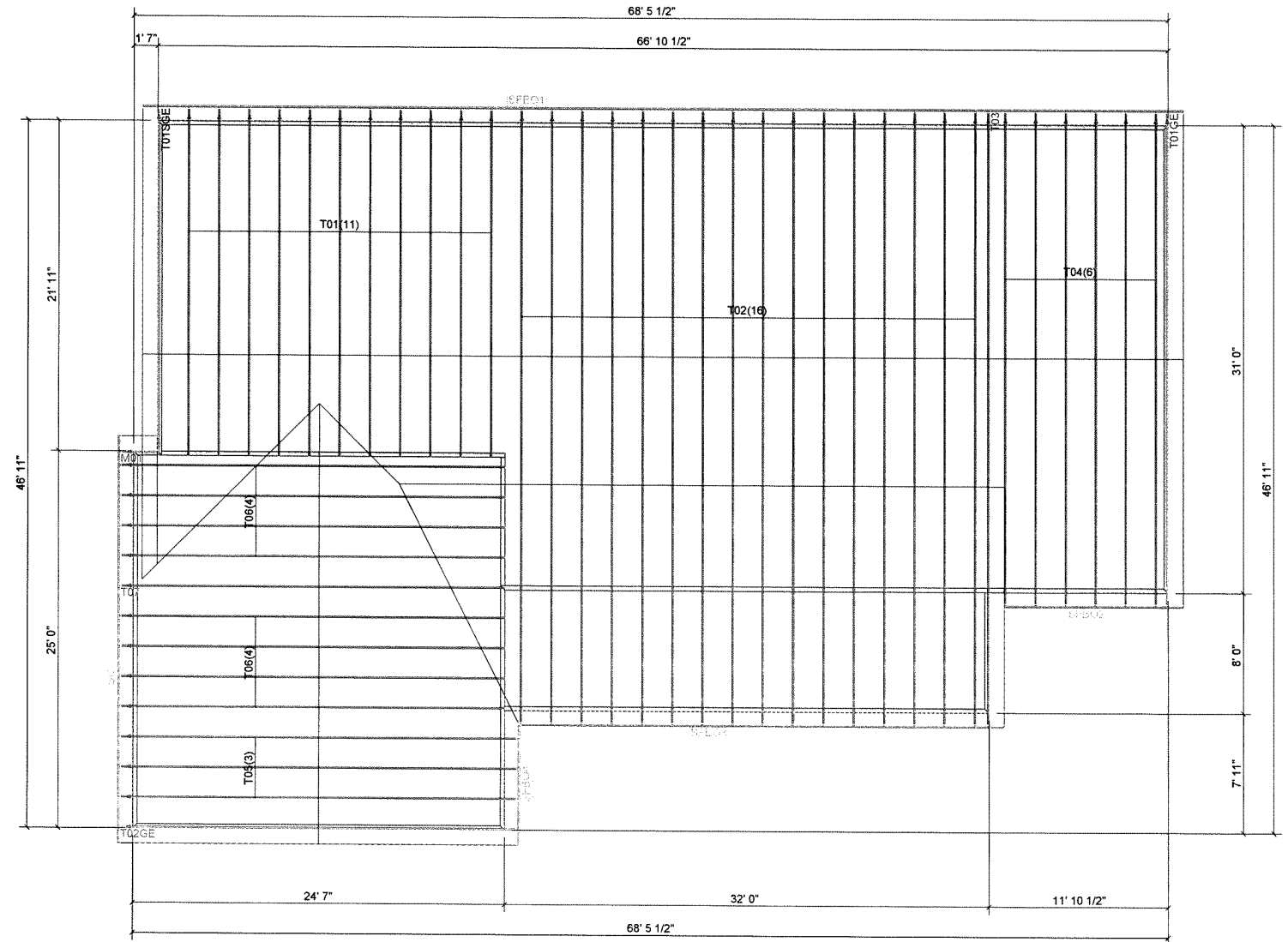
### Failure to Follow Could Cause Property Damage or Personal Injury

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



MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020

Floor Area: 0 SF  
 Floor Plywood: 0  
 Roof Area: 3279.85 SF  
 Roof Plywood: 90 sheets  
 Roof Shingles: 41 Squares



**ROOF TRUSS LAYOUT**  
 1/4" = 1'-0"

Client: **SERVICE BUILDING SUPPLY SANF**  
 Project: **475 McARTHUR RD**  
 Model: **HARRINGTON PROP**  
 Lot #: \_\_\_\_\_  
 Order #: **P20-08023**  
 Designer: \_\_\_\_\_  
 Date: **/ /**

**LONGLEAF** **RUSS CO.**  
 4476 Hwy. 21 W  
 West End, NC 27376  
 (910) 673-4711

**NOTE**  
 IT IS THE RESPONSIBILITY OF THE BUILDING DESIGNER OR ARCHITECT TO PROVIDE AN APPROPRIATE CONNECTION FOR TRUSSES TO SUPPORTING STRUCTURE PER REACTIONS SHOWN ON TRUSS ENGINEERING. SPECIAL CONSIDERATIONS FOR MECHANICAL EQUIPMENT AND/OR PLUMBING (AND THEIR CONNECTIONS) IN TRUSS SPACE MUST BE DIAGRAMMED BY BUILDER ON APPROVED TRUSS LAYOUT PRIOR TO FABRICATION.  
 THIS COMPANY IS A TRUSS MANUFACTURER WHOSE RESPONSIBILITIES ARE LIMITED TO THOSE DESCRIBED IN WTCAT-1995 "DESIGN RESPONSIBILITIES". ACCORDINGLY, IT DISCLAIMS ANY RESPONSIBILITIES AND/OR LIABILITY FOR THE CONSTRUCTION, DESIGN, DRAWINGS, DOCUMENTS INCLUDING THE INSTALLATION AND BRACING OF TRUSSES MANUFACTURED BY THIS COMPANY. SEE: <http://support.abccindustry.com/pubs/ITBDResp-D>