

RE: 19120012 - B
 914 Wendell Falls - Roof

Trenco
 818 Soundside Rd
 Edenton, NC 27932

Site Information:

Customer: Capitol City Homes Project Name: 19120012 - B
 Lot/Block: 914 Model: Braxton B
 Address: 1617 Cypress Cove Dr. Subdivision: Wendell Falls
 City: Wendell State: NC

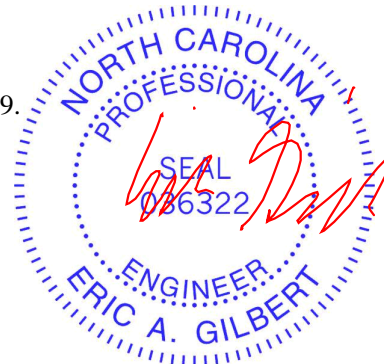
General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.3
 Wind Code: ASCE 7-10 Wind Speed: 130 mph
 Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 26 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	E13614535	PB1	10/9/2019	21	E13614555	T9	10/9/2019
2	E13614536	PB1GE	10/9/2019	22	E13614556	T9A	10/9/2019
3	E13614537	T1	10/9/2019	23	E13614557	T10	10/9/2019
4	E13614538	T1A	10/9/2019	24	E13614558	T10A	10/9/2019
5	E13614539	T1AGE	10/9/2019	25	E13614559	T11	10/9/2019
6	E13614540	T1B	10/9/2019	26	E13614560	T11A	10/9/2019
7	E13614541	T2GE	10/9/2019				
8	E13614542	T2GR	10/9/2019				
9	E13614543	T3GE	10/9/2019				
10	E13614544	T3GR	10/9/2019				
11	E13614545	T4	10/9/2019				
12	E13614546	T4GE	10/9/2019				
13	E13614547	T5	10/9/2019				
14	E13614548	T5AGR	10/9/2019				
15	E13614549	T5GE	10/9/2019				
16	E13614550	T5GR	10/9/2019				
17	E13614551	T6	10/9/2019				
18	E13614552	T7	10/9/2019				
19	E13614553	T8GR	10/9/2019				
20	E13614554	T8GRA	10/9/2019				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).
 Truss Design Engineer's Name: Gilbert, Eric
 My license renewal date for the state of North Carolina is December 31, 2019.
 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.

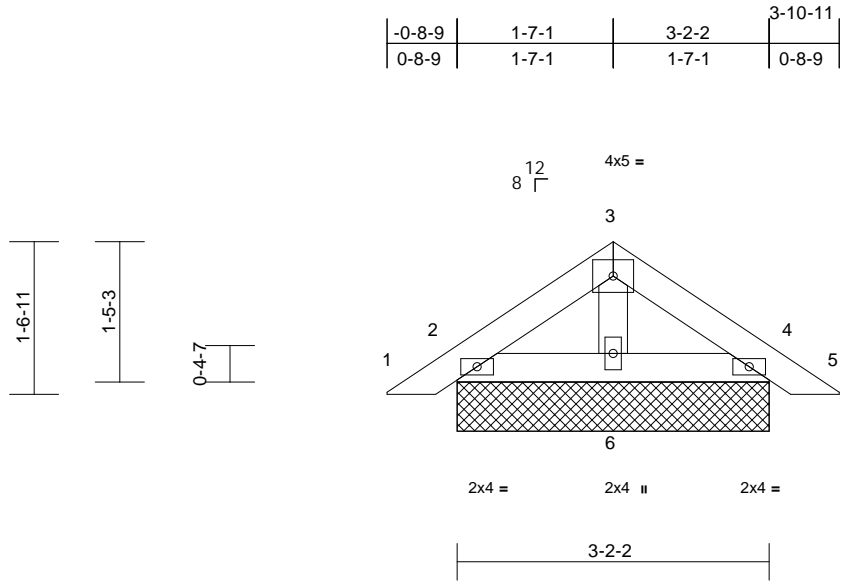
October 09, 2019

Job 19120012 - B	Truss PB1	Truss Type Piggyback	Qty 17	Ply 1	Job Reference (optional) E13614535
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:23.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 14 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(lb/size) 2=81/3-2-2, 4=81/3-2-2,
6=99/3-2-2, 7=81/3-2-2,
11=81/3-2-2
Max Horiz 2=-27 (LC 11), 7=-27 (LC 11)
Max Uplift 2=-8 (LC 13), 4=-10 (LC 14), 7=-8 (LC 13), 11=-10 (LC 14)
Max Grav 2=98 (LC 2), 4=98 (LC 2), 6=115 (LC 2), 7=98 (LC 2), 11=98 (LC 2)

FORCES

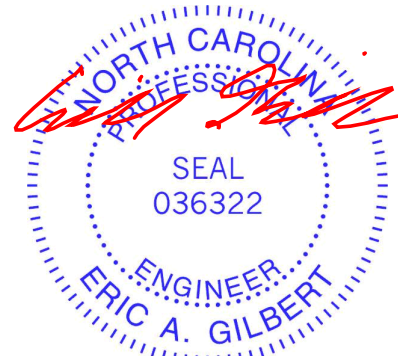
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-36/29, 3-4=-34/30, 4-5=0/20
BOT CHORD 2-6=-7/27, 4-6=-7/27
WEBS 3-6=-49/6

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY
TRENCO
A MiTek Affiliate

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Edenton, NC 27932

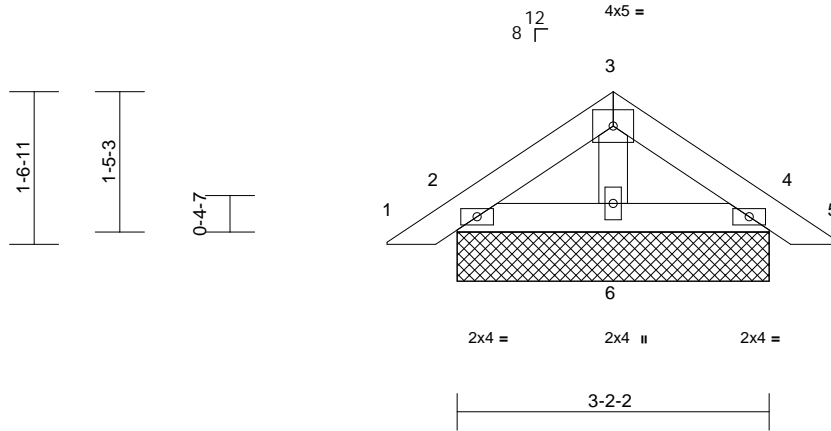
Job 19120012 - B	Truss PB1GE	Truss Type Piggyback	Qty 2	Ply 1	Job Reference (optional) E13614536
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1

-0-8-9	1-7-1	3-2-2	3-10-11
0-8-9	1-7-1	1-7-1	0-8-9



Scale = 1:23.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 14 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(lb/size) 2=81/3-2-2, 4=81/3-2-2,
6=99/3-2-2, 7=81/3-2-2,
11=81/3-2-2
Max Horiz 2=-27 (LC 11), 7=-27 (LC 11)
Max Uplift 2=-8 (LC 13), 4=-10 (LC 14), 7=-8 (LC 13), 11=-10 (LC 14)
Max Grav 2=98 (LC 2), 4=98 (LC 2), 6=115 (LC 2), 7=98 (LC 2), 11=98 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-36/29, 3-4=-34/30, 4-5=0/20
BOT CHORD 2-6=-7/27, 4-6=-7/27
WEBS 3-6=-49/6

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



October 9, 2019

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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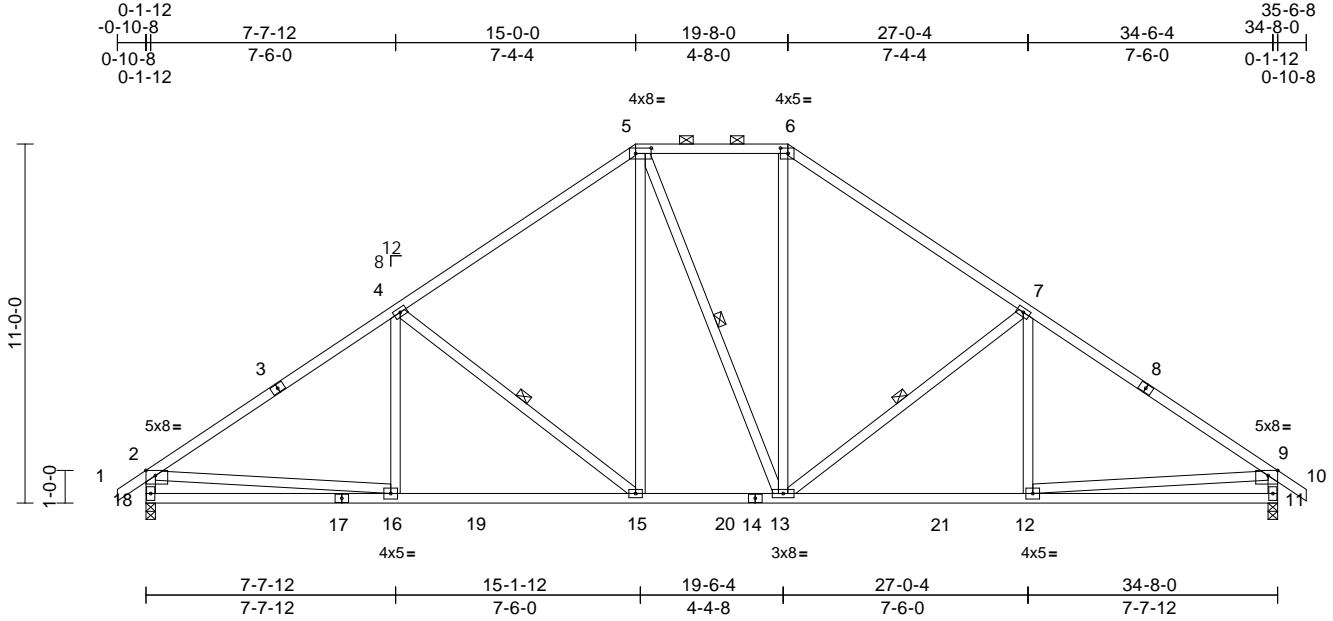
Job 19120012 - B	Truss T1	Truss Type Piggyback Base	Qty 2	Ply 1	Job Reference (optional)	E13614537
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:08

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Scale = 1:70.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.09	15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.21	15-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.05	11	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 230 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 18-2,11-9:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-5-8 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

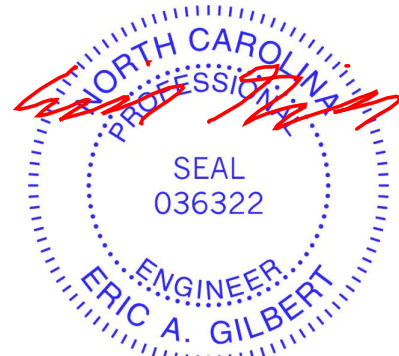
WEBS 1 Row at midpt 4-15, 5-13, 7-13
REACTIONS (lb/size) 11=1236/0-3-8, 18=1236/0-3-8
Max Horiz 18=232 (LC 12)
Max Grav 11=1436 (LC 2), 18=1436 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-1877/313, 3-4=-1661/340, 4-5=-1452/380, 5-6=-1098/376, 6-7=-1453/380, 7-8=-1655/340, 8-9=-1877/313, 9-10=0/43, 2-18=-1366/305, 9-11=-1366/305
BOT CHORD 17-18=-225/524, 16-17=-225/524, 16-19=-151/1591, 15-19=-151/1591, 15-20=0/1159, 14-20=0/1159, 13-14=0/1159, 13-21=-148/1462, 12-21=-148/1462, 11-12=-127/410
WEBS 4-16=0/172, 4-15=-555/205, 5-15=-59/522, 5-13=-152/155, 6-13=-58/485, 7-13=-555/205, 7-12=0/173, 2-16=-22/1144, 9-12=-23/1147

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x5 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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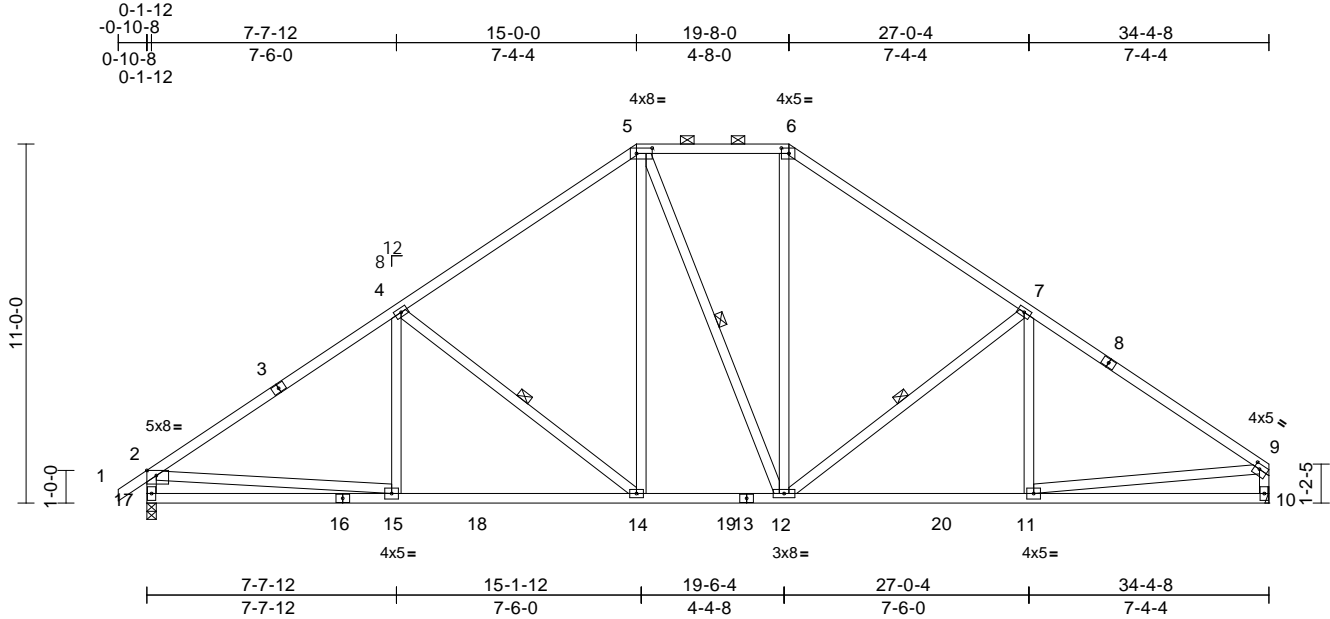
Job 19120012 - B	Truss T1A	Truss Type Piggyback Base	Qty 7	Ply 1	Job Reference (optional)	E13614538
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1

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Scale = 1:70.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.09	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.21	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 227 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 17-2,10-9:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-6-3 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

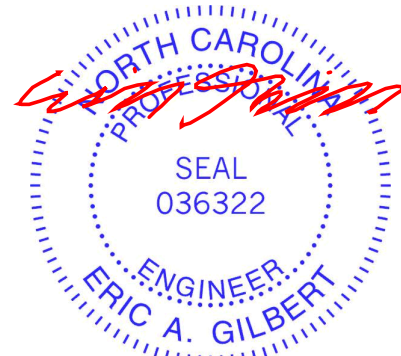
WEBS 1 Row at midpt 4-14, 5-12, 7-12
REACTIONS (lb/size) 10=1177/ Mechanical, 17=1227/0-3-8
Max Horiz 17=230 (LC 12)
Max Grav 10=1362 (LC 2), 17=1426 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-1860/310, 3-4=-1645/337, 4-5=-1434/377, 5-6=-1078/373, 6-7=-1431/376, 7-8=-1591/328, 8-9=-1803/301, 2-17=-1355/304, 9-10=-1295/257
BOT CHORD 16-17=-235/517, 15-16=-235/517, 15-18=-196/1571, 14-18=-196/1571, 14-19=-34/1137, 13-19=-34/1137, 12-13=-34/1137, 12-20=-189/1414, 11-20=-189/1414, 10-11=-67/197
WEBS 4-15=0/173, 4-14=-556/206, 5-14=-59/522, 5-12=-160/144, 6-12=-57/475, 7-12=-519/201, 7-11=-9/140, 2-15=-21/1131, 9-11=-124/1236

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

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x5 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 17 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



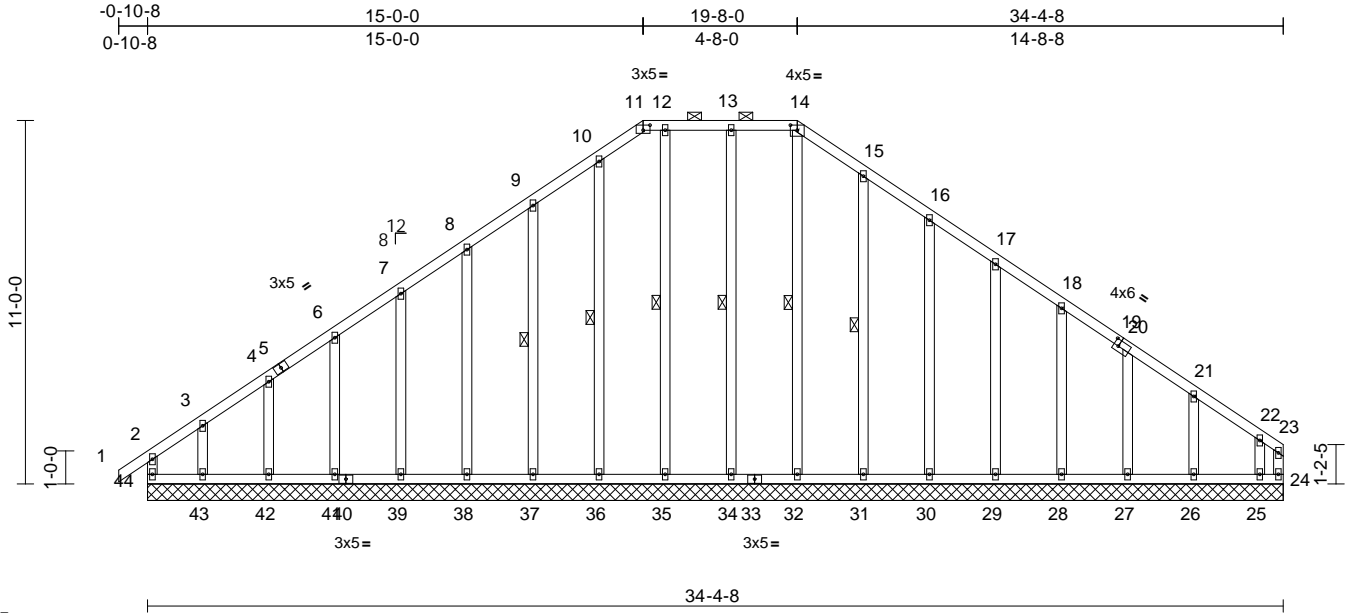
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T1AGE	Truss Type Piggyback Base Supported Gable	Qty 2	Ply 1	Job Reference (optional)	E13614539
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:09
ID:Dhqq160WfebYZRt9KX3SbAyVSxl-fa6k6tpGq4PdA1u9jpEWUHsH8Qt9sqOgQt2OOPyVRGC

Page: 1



Scale = 1:69.7

Plate Offsets (X, Y): [11:0-2-8,0-1-13], [14:0-2-8,0-1-13], [19:0-1-12,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 273 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.2 *Except*
41-6,42-4,43-3,27-20,26-21,25-22:2x4 SP No.3

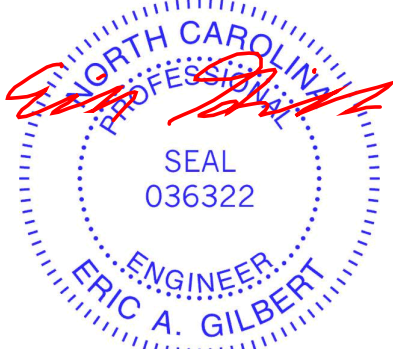
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-14.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 14-32, 13-34, 12-35, 10-36, 9-37, 15-31

REACTIONS (lb/size)
24=3/34-4-8, 25=102/34-4-8, 26=140/34-4-8, 27=134/34-4-8, 28=136/34-4-8, 29=135/34-4-8, 30=135/34-4-8, 31=140/34-4-8, 32=133/34-4-8, 34=162/34-4-8, 35=149/34-4-8, 36=134/34-4-8, 37=135/34-4-8, 38=135/34-4-8, 39=136/34-4-8, 41=134/34-4-8, 42=142/34-4-8, 43=105/34-4-8, 44=113/34-4-8
Max Horiz 44=230 (LC 10)
Max Uplift 24=-216 (LC 12), 25=-191 (LC 9), 26=-27 (LC 14), 27=-30 (LC 14), 28=-30 (LC 14), 29=-29 (LC 14), 30=-32 (LC 14), 31=-28 (LC 14), 34=-13 (LC 9), 37=-41 (LC 13), 38=-28 (LC 13), 39=-29 (LC 13), 41=-33 (LC 13), 42=-16 (LC 13), 43=-115 (LC 10), 44=-119 (LC 9)

Max Grav 24=241 (LC 9), 25=257 (LC 12), 26=168 (LC 26), 27=165 (LC 26), 28=166 (LC 26), 29=166 (LC 26), 30=166 (LC 26), 31=173 (LC 26), 32=153 (LC 27), 34=169 (LC 30), 35=165 (LC 28), 36=164 (LC 25), 37=167 (LC 25), 38=166 (LC 25), 39=166 (LC 25), 41=168 (LC 25), 42=167 (LC 2), 43=205 (LC 25), 44=216 (LC 26)
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-44=-173/97, 1-2=0/43, 2-3=-188/170, 3-4=-134/130, 4-5=-128/118, 5-6=-124/128, 6-7=-115/126, 7-8=-151/174, 8-9=-198/231, 9-10=-255/298, 10-11=-269/314, 11-12=-245/294, 12-13=-245/294, 13-14=-245/294, 14-15=-282/329, 15-16=-233/273, 16-17=-183/212, 17-18=-135/154, 18-19=-75/95, 19-20=-86/84, 20-21=-82/73, 21-22=-91/85, 22-23=-153/135, 23-24=-141/122
BOT CHORD 43-44=-96/106, 42-43=-96/106, 41-42=-96/106, 40-41=-96/106, 39-40=-96/106, 38-39=-96/106, 37-38=-96/106, 36-37=-96/106, 35-36=-96/106, 34-35=-96/106, 33-34=-96/106, 32-33=-96/106, 31-32=-96/106, 30-31=-96/106, 29-30=-96/106, 28-29=-96/106, 27-28=-96/106, 26-27=-96/106, 25-26=-96/106, 24-25=-96/106

WEBS 14-32=-121/65, 13-34=-129/67, 12-35=-125/54, 10-36=-124/19, 9-37=-144/100, 8-38=-126/78, 7-39=-128/82, 6-41=-128/82, 4-42=-127/80, 3-43=-141/109, 15-31=-133/78, 16-30=-130/85, 17-29=-127/81, 18-28=-128/82, 20-27=-126/81, 21-26=-132/84, 22-25=-155/128

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33



October 9, 2019

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
19120012 - B	T1AGE	Piggyback Base Supported Gable	2	1	E13614539

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:09
ID:Dhqql60WfebYZRt9KX3SbAyVSxl-fa6k6tpGq4PdA1u9jpEWUHsH8Qt9sqOgQt2OOPyVRGC

Page: 2

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCELL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 12) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 13) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 44, 24, 34, 37, 38, 39, 41, 42, 43, 31, 30, 29, 28, 27, 26, and 25. This connection is for uplift only and does not consider lateral forces.
- 14) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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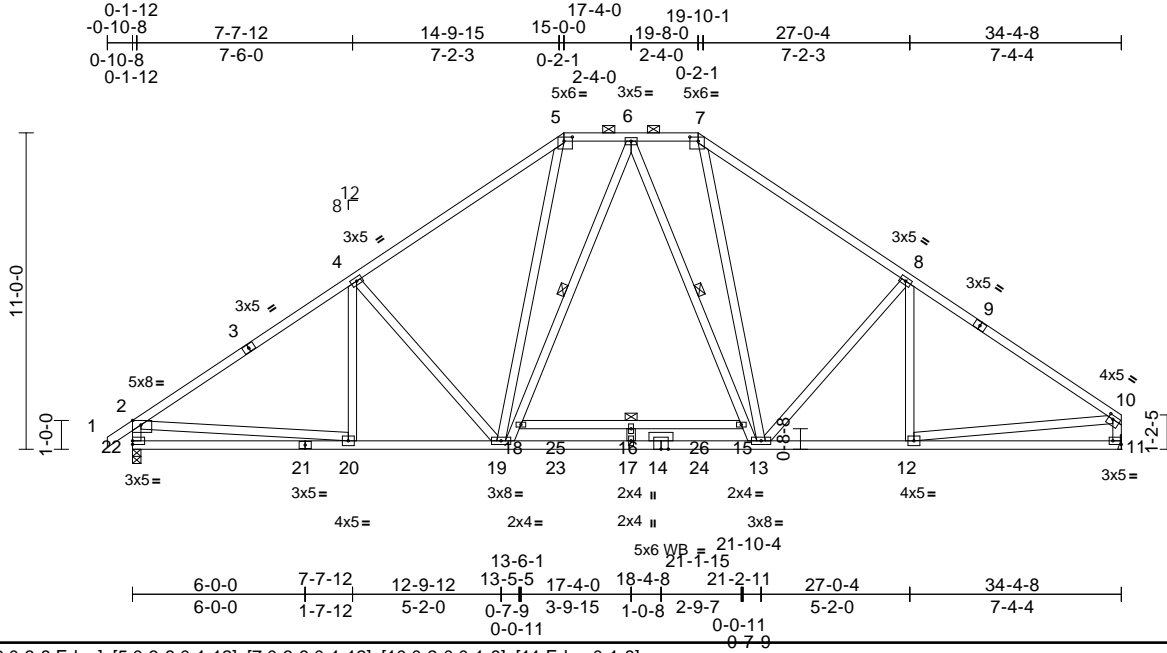
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T1B	Truss Type Piggyback Base	Qty 8	Ply 1	Job Reference (optional) E13614540
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:10
ID:p68hf5zeMjCzhz8aeOWlzXyVSxL-7mg6JDquaOXUnBTGLXII1VOGkq0AbD3pfXnxyVRGB

Page: 1



Scale = 1:80.1

Plate Offsets (X, Y): [2:0-3-8,Edge], [5:0-3-8,0-1-12], [7:0-3-8,0-1-12], [10:0-2-0,0-1-8], [11:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.31	16	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.66	16	>624	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.05	11	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 253 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 22-21:2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 22-2,11-10,17-16:2x4 SP No.3
OTHERS 2x4 SP No.3
BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-9-13 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 15-18
WEBS 1 Row at midpt 6-19, 6-13
REACTIONS (lb/size) 11=1358/ Mechanical, 22=1405/0-3-8
Max Horiz 22=230 (LC 10)
Max Grav 11=1557 (LC 26), 22=1611 (LC 25)
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-2132/90, 3-4=-1945/117, 4-5=-1918/150, 5-6=-1377/200, 6-7=-1365/199, 7-8=-1905/150, 8-9=-1887/115, 9-10=-2067/87, 2-22=-1525/165, 10-11=-1471/116
BOT CHORD 21-22=-211/570, 20-21=-211/570, 19-20=-14/1819, 19-23=0/1469, 17-23=0/1469, 14-17=0/1469, 14-24=0/1469, 13-24=0/1469, 12-13=-12/1633, 11-12=-52/224, 18-25=-110/0, 16-25=-110/0, 16-26=-110/0, 15-26=-110/0
WEBS 4-20=-89/35, 4-19=-424/253, 5-19=0/741, 7-13=0/737, 8-13=-385/255, 8-12=-152/40, 2-20=0/1327, 10-12=0/1442, 18-19=-286/74, 6-18=-160/161, 6-15=-181/145, 13-15=-307/65, 16-17=-16/29

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 17-4-0 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x5 MT20 unless otherwise indicated.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 22 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

NOTES



October 9, 2019

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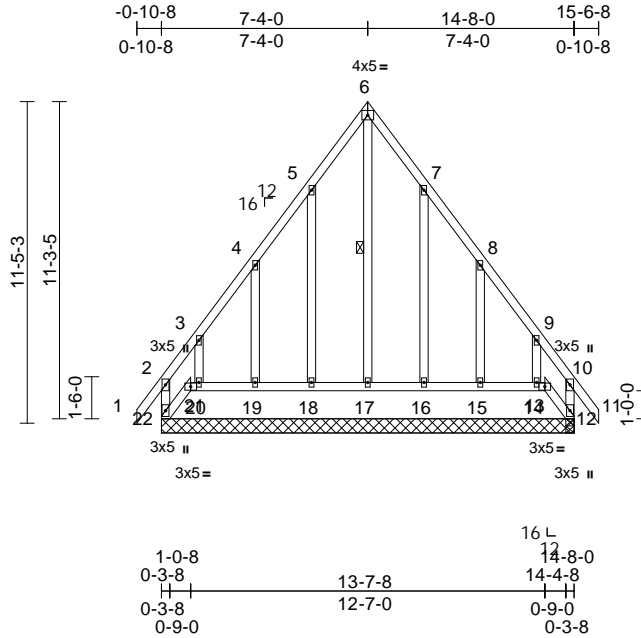
TRENCO ENGINEERING BY
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T2GE	Truss Type Roof Special	Qty 1	Ply 1	Job Reference (optional) E13614541
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 S Sep 21 2019 Print: 8.320 S Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:11
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Page: 1



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	0.32	Vert(LL)	0.00	21-22	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	0.00	21-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 123 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except* 17-6,18-5,16-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-17

REACTIONS (lb/size)
12=97/14-8-0, 13=13/14-8-0, 14=106/14-8-0, 15=139/14-8-0, 16=140/14-8-0, 17=131/14-8-0, 18=140/14-8-0, 19=139/14-8-0, 20=106/14-8-0, 21=13/14-8-0, 22=97/14-8-0
Max Horiz 22=275 (LC 12)
Max Uplift 12=-152 (LC 10), 13=-40 (LC 11), 14=-81 (LC 14), 15=-106 (LC 14), 16=-92 (LC 14), 18=-92 (LC 13), 19=-105 (LC 13), 20=-86 (LC 13), 21=-358 (LC 12), 22=-467 (LC 9)
Max Grav 12=203 (LC 25), 13=25 (LC 10), 14=165 (LC 26), 15=197 (LC 26), 16=207 (LC 26), 17=421 (LC 14), 18=208 (LC 25), 19=196 (LC 25), 20=178 (LC 25), 21=337 (LC 11), 22=528 (LC 12)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-22=-233/205, 1-2=0/62, 2-3=-241/245, 3-4=-147/162, 4-5=-245/341, 5-6=-375/498, 6-7=-375/498, 7-8=-245/341, 8-9=-134/155, 9-10=-223/226, 10-11=0/62, 10-12=-219/188

BOT CHORD 21-22=-322/302, 20-21=-144/143, 19-20=-144/143, 18-19=-144/143, 17-18=-144/143, 16-17=-144/143, 15-16=-144/143, 14-15=-144/143, 13-14=-144/143, 12-13=-142/134
WEBS 6-17=-717/467, 5-18=-204/172, 4-19=-228/212, 3-20=-228/206, 7-16=-204/172, 8-15=-228/212, 9-14=-224/205

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - 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 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 22, 12, and 21. This connection is for uplift only and does not consider lateral forces.
 - One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13, 18, 19, 20, 16, 15, and 14. This connection is for uplift only and does not consider lateral forces.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



October 9, 2019

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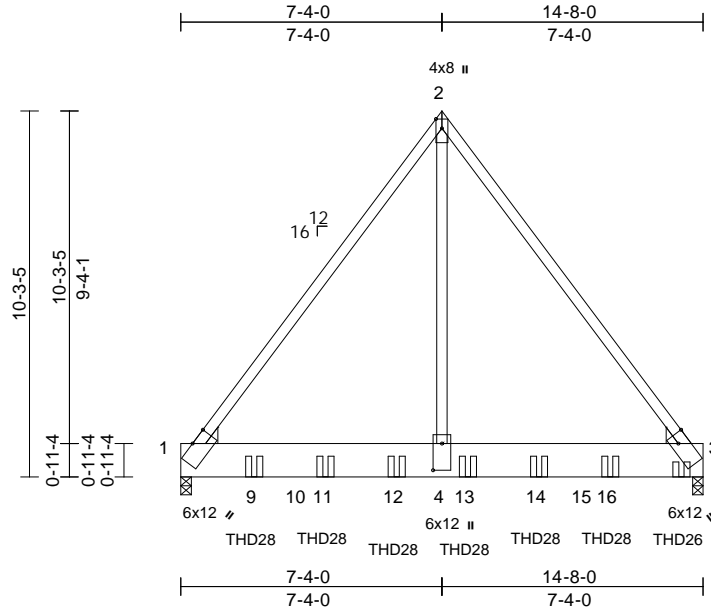
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T2GR	Truss Type Roof Special Girder	Qty 1	Ply 2	Job Reference (optional)	E13614542
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:12
ID:eGWYw82PxZz7Quck?fd9CoyVSxF-39oskvs86?nB1UdkOxnD6wUbPetb32N67rG2kyVRG9

Page: 1



Scale = 1:64.7

Plate Offsets (X, Y): [1:0-5-13,Edge], [2:Edge,0-2-0], [3:0-3-3,Edge], [4:0-9-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.05	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.09	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 239 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x12 SP 2400F 2.0E
WEBS 2x4 SP No.2
WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2

BRACING

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

REACTIONS

(lb/size) 1=4132/0-3-8, 3=4945/0-3-8
Max Horiz 1=-205 (LC 28)
Max Grav 1=4805 (LC 2), 3=5747 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4004/0, 2-3=-4003/0
BOT CHORD 1-9=0/2304, 9-10=0/2304, 10-11=0/2304,
11-12=0/2304, 4-12=0/2304, 4-13=0/2304,
13-14=0/2304, 14-15=0/2304, 15-16=0/2304,
3-16=0/2304
WEBS 2-4=0/5756

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x12 - 2 rows staggered at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Use USP THD28 (With 28-16d nails into Girder & 16-10d x 1-1/2 nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 12-0-12 to connect truss(es) to back face of bottom chord.
- Use USP THD26 (With 18-16d nails into Girder & 12-10d x 1-1/2 nails into Truss) or equivalent at 14-0-12 from the left end to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-48, 2-3=-48, 1-3=-20
Concentrated Loads (lb)

Vert: 7=-1162 (B), 9=-1157 (B), 11=-1157 (B),
12=-1157 (B), 13=-1157 (B), 14=-1157 (B), 16=-1157 (B)



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY
TRENCO
A MiTek Affiliate

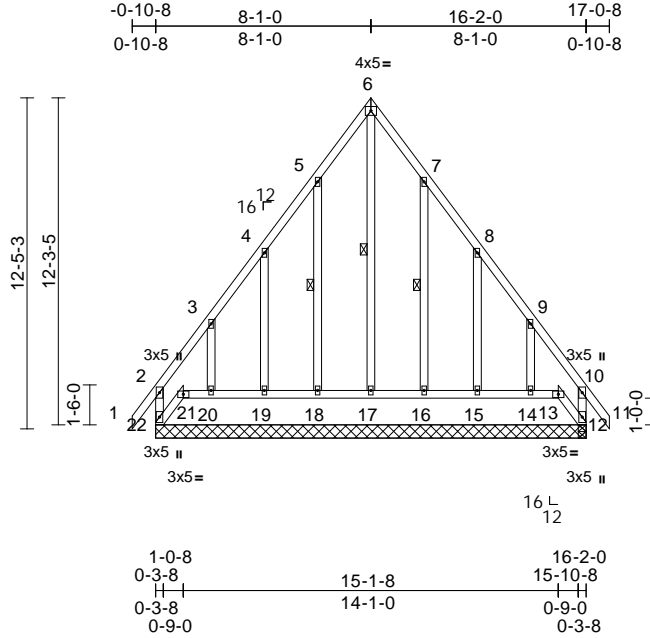
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T3GE	Truss Type Roof Special	Qty 1	Ply 1	Job Reference (optional) E13614543
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 S Sep 21 2019 Print: 8.320 S Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:12
ID: _ynQP1vtmtSpz2hQL8PLjGyVSxR-39oskvs86?nB1UdkOxnD6wUk5etx37r67rG2?kyVRG9

Page: 1



Scale = 1:86.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	0.00	21-22	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	0.00	21-22	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	-0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 139 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.2 *Except* 20-3,14-9:2x4 SP No.3

BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 6-17, 5-18, 7-16

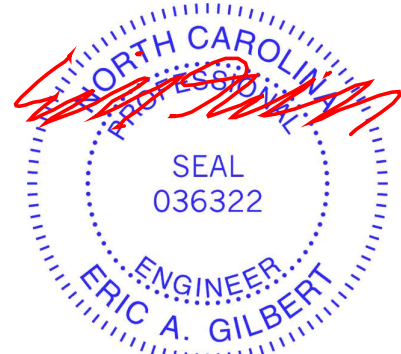
REACTIONS	(lb/size)
Max Horiz	22=-296 (LC 11)
Max Uplift	12=-133 (LC 10), 13=-18 (LC 12), 14=-134 (LC 14), 15=-100 (LC 14), 16=-89 (LC 14), 17=-4 (LC 12), 18=-90 (LC 13), 19=-100 (LC 13), 20=-136 (LC 13), 21=-316 (LC 12), 22=-474 (LC 9)
Max Grav	12=205 (LC 25), 13=37 (LC 9), 14=220 (LC 26), 15=191 (LC 26), 16=208 (LC 26), 17=473 (LC 14), 18=209 (LC 25), 19=189 (LC 25), 20=226 (LC 25), 21=336 (LC 11), 22=541 (LC 12)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-22=-237/183, 1-2=0/62, 2-3=-238/235, 3-4=-155/216, 4-5=-298/396, 5-6=-424/544, 6-7=-424/545, 7-8=-298/395, 8-9=-157/219, 9-10=-220/218, 10-11=0/62, 10-12=-225/168

BOT CHORD	
	21-22=-348/331, 20-21=-153/155, 19-20=-153/155, 18-19=-153/155, 17-18=-153/155, 16-17=-153/155, 15-16=-153/155, 14-15=-153/155, 13-14=-153/155, 12-13=-145/141
WEBS	
	6-17=-791/543, 5-18=-198/163, 4-19=-219/202, 3-20=-252/227, 7-16=-197/163, 8-15=-218/202, 9-14=-249/226

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
 - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - Gable studs spaced at 2-0-0 oc.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 22, 12, and 21. This connection is for uplift only and does not consider lateral forces.
 - One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 13, 17, 18, 19, 20, 16, 15, and 14. This connection is for uplift only and does not consider lateral forces.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



October 9, 2019

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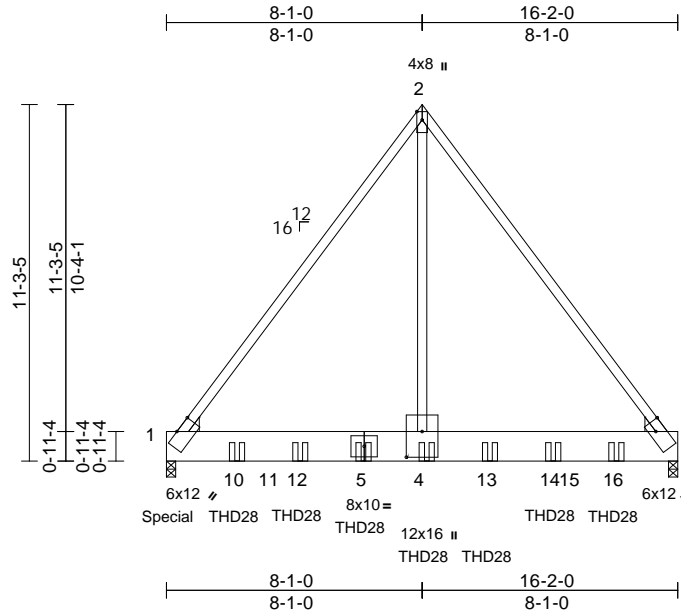
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T3GR	Truss Type Roof Special Girder	Qty 1	Ply 2	Job Reference (optional)	E13614544
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:13
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Page: 1



Scale = 1:72.9

Plate Offsets (X, Y): [1:0-6-9,Edge], [2:Edge,0-2-0], [3:0-3-15,Edge], [4:0-9-12,0-6-0]

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	0.79	Vert(LL)	-0.05	4-6	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.12	4-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 264 lb	FT = 20%

LUMBER
 TOP CHORD 2x4 SP 2400F 2.0E
 BOT CHORD 2x12 SP 2400F 2.0E
 WEBS 2x4 SP No.2
 WEDGE Left: 2x6 SP No.2
 Right: 2x6 SP No.2

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

REACTIONS (lb/size) 1=6493/0-3-8, 3=5297/0-3-8
 Max Horiz 1=227 (LC 7)
 Max Grav 1=7415 (LC 2), 3=6054 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-4998/0, 2-3=-4998/0
 BOT CHORD 1-10=0/2891, 10-11=0/2891, 11-12=0/2891, 5-12=0/2891, 4-5=0/2891, 4-13=0/2891, 13-14=0/2891, 14-15=0/2891, 15-16=0/2891, 3-16=0/2891
 WEBS 2-4=0/7277

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
 - Provide adequate drainage to prevent water ponding.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - Use USP THD28 (With 28-16d nails into Girder & 16-10d x 1-1/2 nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-2-12 from the left end to 14-2-12 to connect truss(es) to back face of bottom chord.
 - Fill all nail holes where hanger is in contact with lumber.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1533 lb down at 0-1-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- LOAD CASE(S)** Standard
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-2=-48, 2-3=-48, 1-3=-20
 Concentrated Loads (lb)

Vert: 1=-1347 (B), 5=-1338 (B), 4=-1338 (B), 10=-1338 (B), 12=-1338 (B), 13=-1338 (B), 14=-1338 (B), 16=-1338 (B)

- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x12 - 2 rows staggered at 0-7-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - 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.
 - Unbalanced roof live loads have been considered for this design.



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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818 Soundside Road
 Edenton, NC 27932

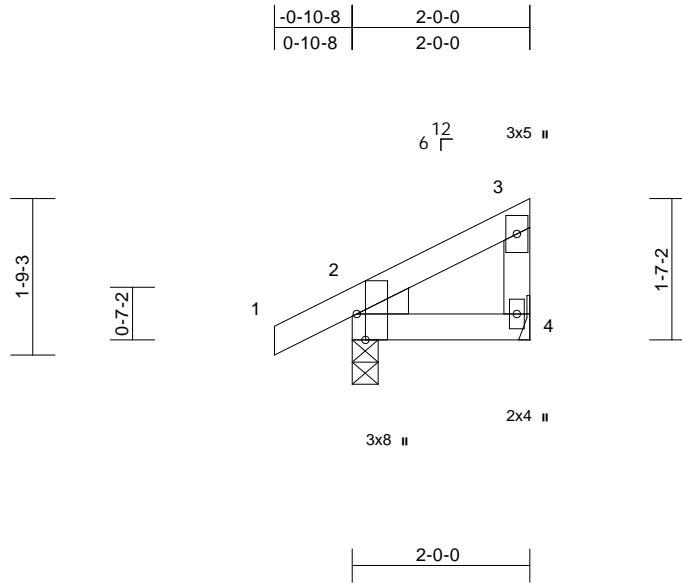
Job 19120012 - B	Truss T4	Truss Type Monopitch	Qty 2	Ply 1	Job Reference (optional) E13614545
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:00:19

Page: 1

ID: _ynQP1vtmtSpz2hQI8PLjGyVSxR-uYs79I4ipaJPFrUktRyfOKt6VEbhxx0hi0?RF_yVBmB



Scale = 1:25.9

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 10 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (lb/size) 2=114/0-3-8, 4=53/ Mechanical
 Max Horiz 2=41 (LC 14)
 Max Uplift 2=8 (LC 15), 4=7 (LC 12)
 Max Grav 2=139 (LC 2), 4=62 (LC 2)

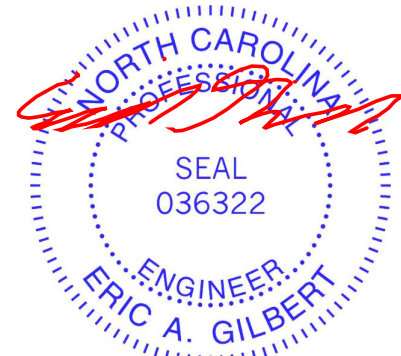
FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 4.
- 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



October 9, 2019

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



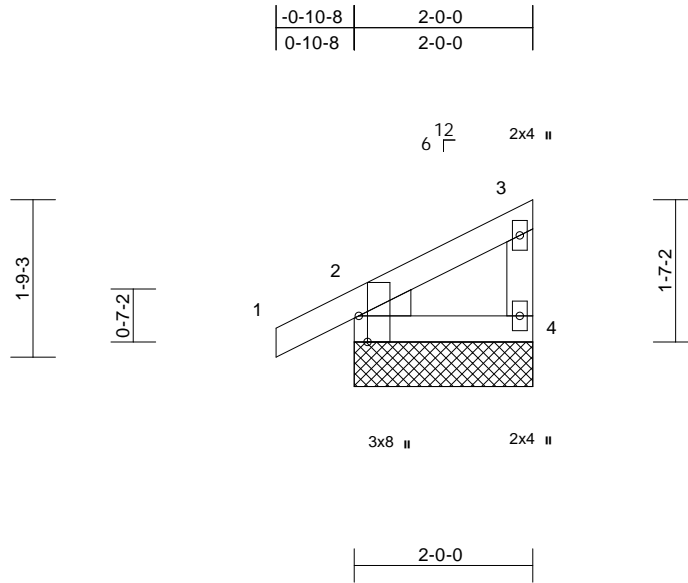
818 Soundside Road
 Edenton, NC 27932

Job 19120012 - B	Truss T4GE	Truss Type Monopitch Supported Gable	Qty 2	Ply 1	Job Reference (optional) E13614546
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:00:51
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Page: 1



Scale = 1:25.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 10 lb	FT = 20%	

LUMBER

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

BRACING

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

REACTIONS

(lb/size) 2=114/2-0-0, 4=56/2-0-0, 5=114/2-0-0
 Max Horiz 2=41 (LC 14), 5=41 (LC 14)
 Max Uplift 2=-8 (LC 15), 4=-6 (LC 12), 5=-8 (LC 15)
 Max Grav 2=139 (LC 2), 4=65 (LC 2), 5=139 (LC 2)

FORCES

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

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; 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 2.00 times flat roof load of 13.9 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 live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) One RT4 USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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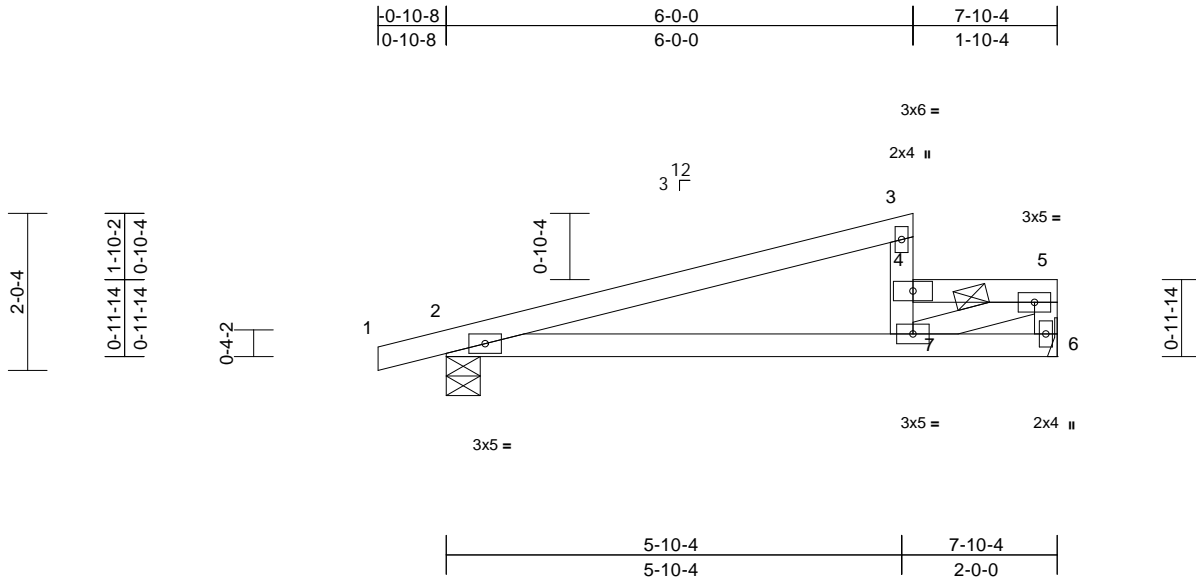
818 Soundside Road
 Edenton, NC 27932

Job 19120012 - B	Truss T5	Truss Type Half Hip	Qty 7	Ply 1	Job Reference (optional) E13614547
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:01:17
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Page: 1



Scale = 1:29.6

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	0.68	Vert(LL)	-0.07	7-10	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.13	7-10	>707	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 30 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-7, 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=307/0-5-4, 6=275/ Mechanical
Max Horiz 2=56 (LC 15)
Max Uplift 2=33 (LC 11), 6=1 (LC 15)
Max Grav 2=419 (LC 35), 6=305 (LC 2)

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

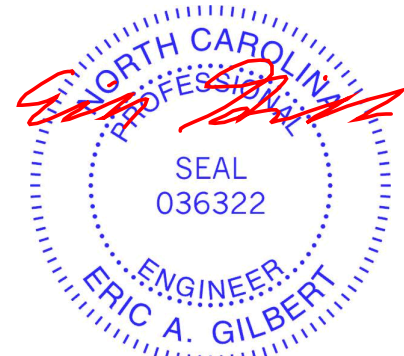
TOP CHORD 2-3=-395/110, 4-5=-756/262, 5-6=-325/141
BOT CHORD 2-7=-146/349
WEBS 5-7=-289/808

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-10-8 to 7-8-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 6.
- 10) One RT4 USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

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ENGINEERING BY
TRENCO
A MiTek Affiliate

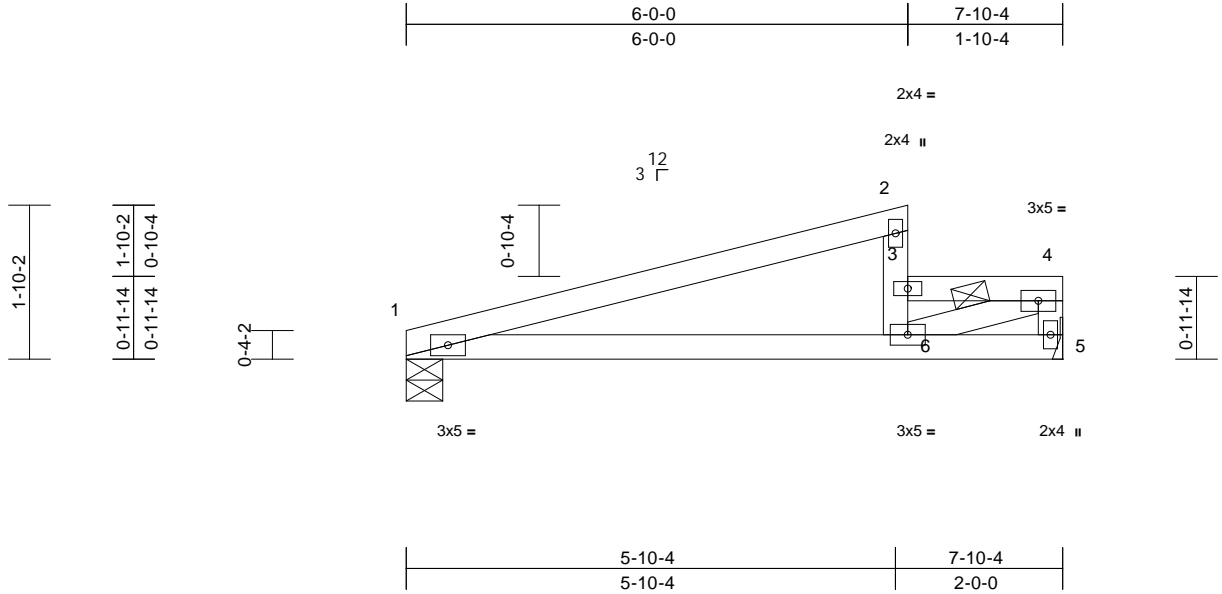
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T5AGR	Truss Type Half Hip Girder	Qty 1	Ply 2	Job Reference (optional) E13614548
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:01:44
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.04	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.07	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.17	Horz(CT)	0.00	1	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 57 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-6, 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=263/0-5-4, 5=277/ Mechanical
Max Horiz 1=51 (LC 11)
Max Uplift 1=-7 (LC 7), 5=-2 (LC 11)
Max Grav 1=351 (LC 30), 5=308 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-400/0, 3-4=-768/15, 4-5=-329/8
BOT CHORD 1-6=-26/355
WEBS 4-6=-10/820

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 5.
- One RT4 USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

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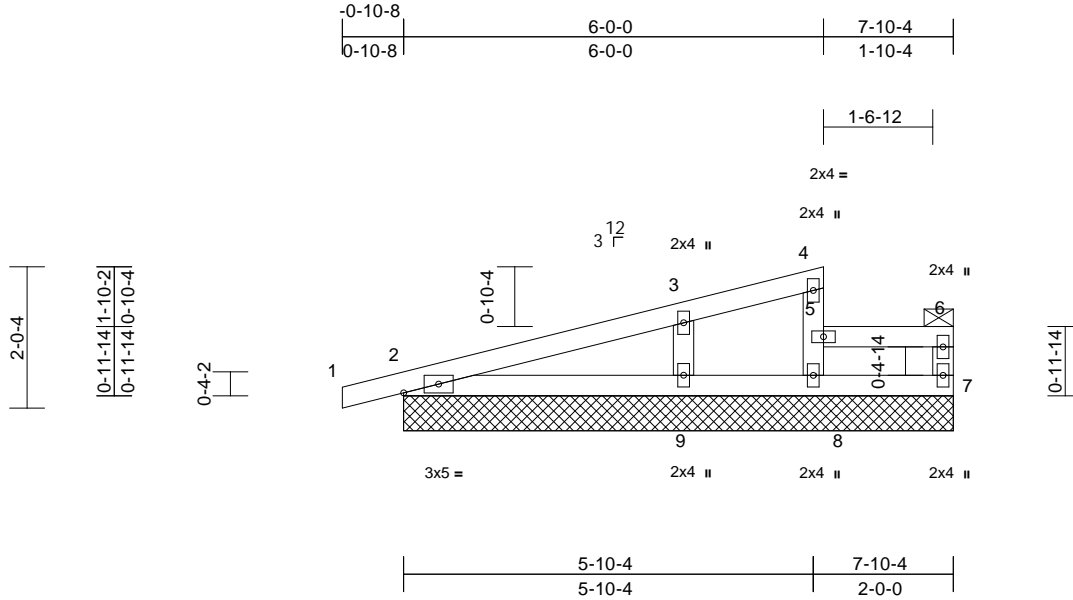
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T5GE	Truss Type Half Hip Supported Gable	Qty 1	Ply 1	Job Reference (optional)	E13614549
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:02:20
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Page: 1



Scale = 1:32.9

Plate Offsets (X, Y): [9:0-0-4,3-6-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 29 lb	FT = 20%	

LUMBER

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

BRACING

- TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 5-8, 5-6.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

- All bearings 7-10-4.
- (lb) - Max Horiz 2=56 (LC 15), 10=56 (LC 15)
- Max Uplift All uplift 100 (lb) or less at joint(s) 2, 7, 8, 9, 10
- Max Grav All reactions 250 (lb) or less at joint (s) 2, 7, 8, 10 except 9=371 (LC 35)

FORCES

- (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
- WEBS 3-9=255/140

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) -0-10-8 to 7-8-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 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 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One RT4 USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 7, 8, and 9. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

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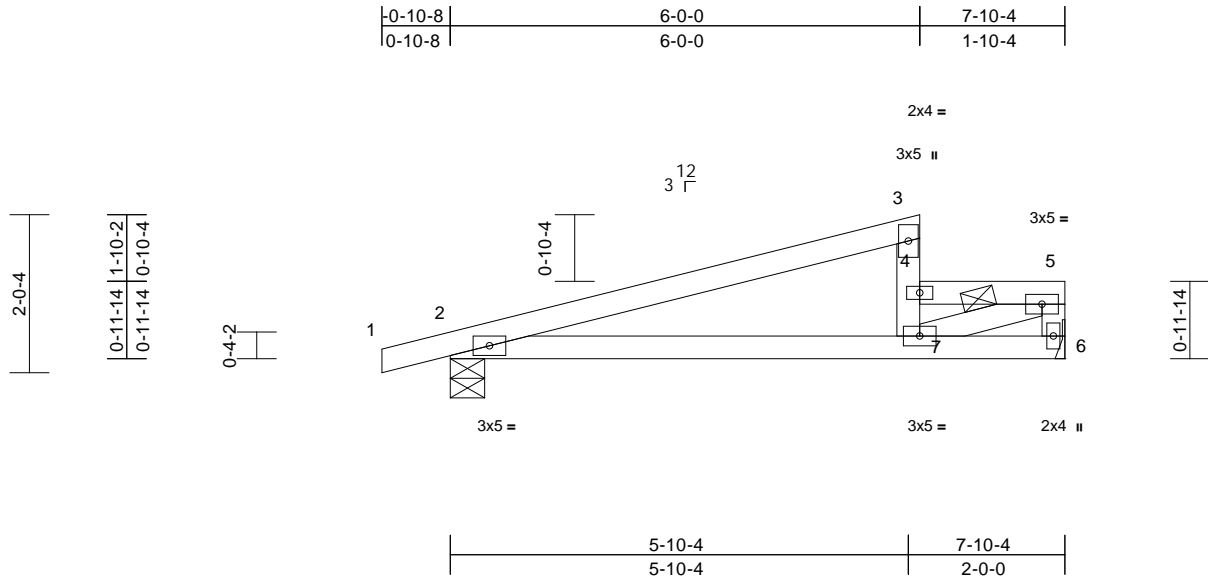
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T5GR	Truss Type Half Hip Girder	Qty 1	Ply 2	Job Reference (optional)	E13614550
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.04	7-10	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.07	7-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.17	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 60 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-7, 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

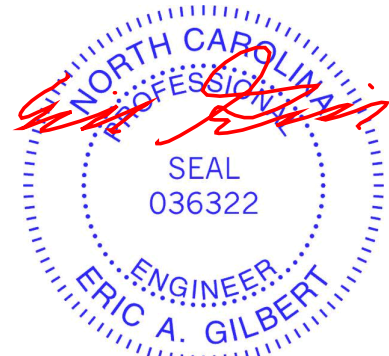
REACTIONS (lb/size) 2=307/0-5-4, 6=275/ Mechanical
Max Horiz 2=56 (LC 11)
Max Uplift 2=-33 (LC 7), 6=-1 (LC 11)
Max Grav 2=419 (LC 31), 6=305 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-393/0, 4-5=-751/12, 5-6=-324/7
BOT CHORD 2-7=-17/347
WEBS 5-7=-8/803

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 6.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

- NOTES**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - 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.
 - Unbalanced roof live loads have been considered for this design.



October 9, 2019

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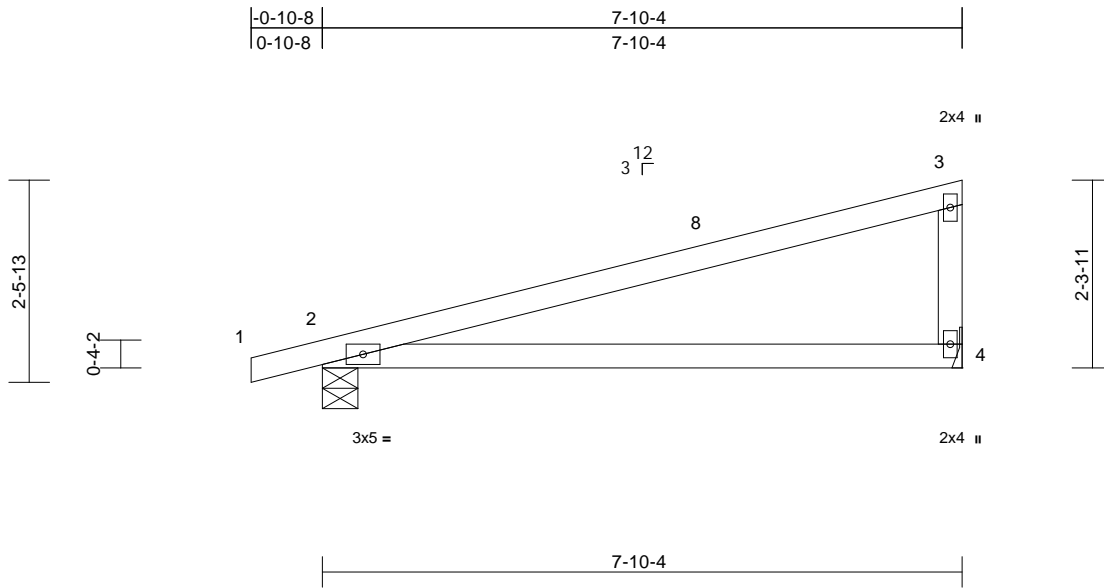
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)	E13614551
19120012 - B	T6	Monopitch	2	1		

Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:28.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	0.16	4-7	>563	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.37	4-7	>250	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 28 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(lb/size) 2=305/0-5-4, 4=259/ Mechanical
 Max Horiz 2=63 (LC 14)
 Max Uplift 2=-34 (LC 11), 4=-14 (LC 15)
 Max Grav 2=364 (LC 2), 4=305 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

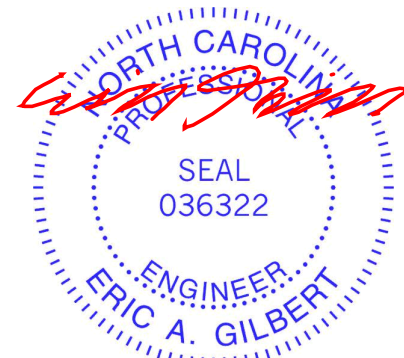
TOP CHORD 1-2=0/16, 2-8=-205/44, 3-8=-65/58,
 3-4=-203/140
 BOT CHORD 2-4=-101/194

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C
 Exterior (2) zone; cantilever left and right exposed ; end
 vertical left and right exposed;C-C for members and
 forces & MWFRS for reactions shown; Lumber
 DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber
 DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground
 snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15
 Plate DOL=1.15); Category II; Exp B; Fully Exp.;
 Ct=1.10
- 3) Unbalanced snow loads have been considered for this
 design.
- 4) This truss has been designed for greater of min roof live
 load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on
 overhangs non-concurrent with other live loads.

- 5) * This truss has been designed for a live load of 20.0psf
 on the bottom chord in all areas where a rectangle
 3-06-00 tall by 2-00-00 wide will fit between the bottom
 chord and any other members.
- 6) Bearings are assumed to be: Joint 2 SP No.2 crushing
 capacity of 565 psi.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to
 bearing plate capable of withstanding 14 lb uplift at joint
 4.
- 9) One RT7A USP connectors recommended to connect
 truss to bearing walls due to UPLIFT at jt(s) 2. This
 connection is for uplift only and does not consider lateral
 forces.
- 10) This truss is designed in accordance with the 2015
 International Residential Code sections R502.11.1 and
 R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



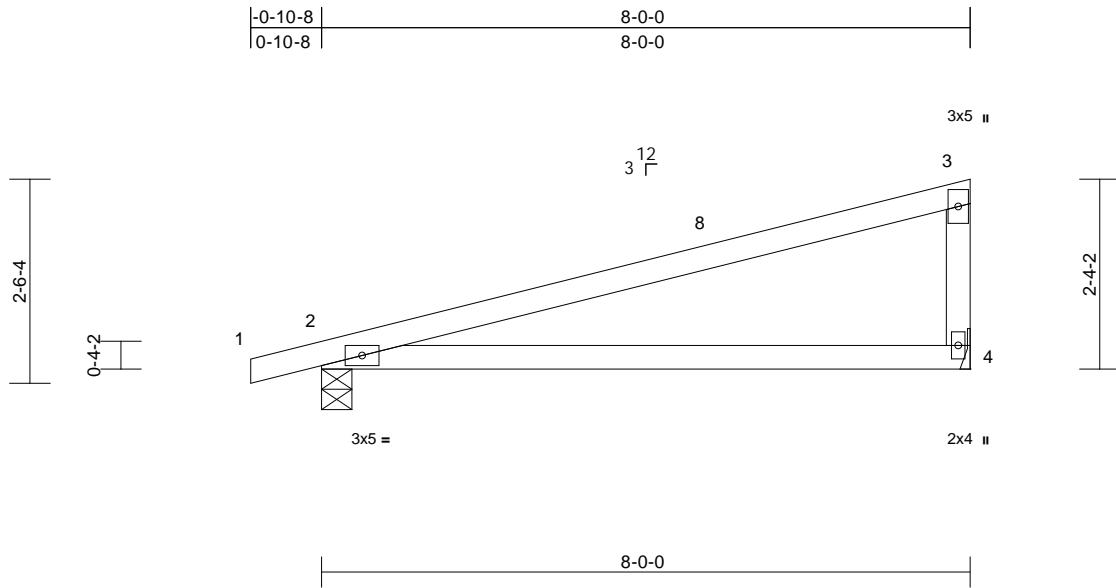
818 Soundside Road
 Edenton, NC 27932

Job 19120012 - B	Truss T7	Truss Type Monopitch	Qty 5	Ply 1	Job Reference (optional) E13614552
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:03:36
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Page: 1



Scale = 1:28.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	0.18	4-7	>535	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.40	4-7	>236	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 28 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (lb/size) 2=310/0-4-8, 4=264/ Mechanical
Max Horiz 2=64 (LC 14)
Max Uplift 2=-35 (LC 11), 4=-14 (LC 15)
Max Grav 2=370 (LC 2), 4=311 (LC 2)

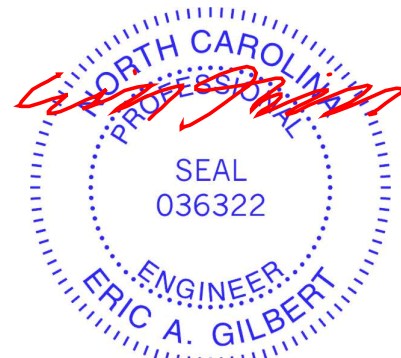
FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C
Exterior (2) zone; cantilever left and right exposed ; end
vertical left and right exposed;C-C for members and
forces & MWFRS for reactions shown; Lumber
DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber
DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground
snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15
Plate DOL=1.15); Category II; Exp B; Fully Exp.;
Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this
design.
- 4) This truss has been designed for greater of min roof live
load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on
overhangs non-concurrent with other live loads.
- 5) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.

- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 14 lb uplift at joint
4.
- 8) One RT7A USP connectors recommended to connect
truss to bearing walls due to UPLIFT at jt(s) 2. This
connection is for uplift only and does not consider lateral
forces.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

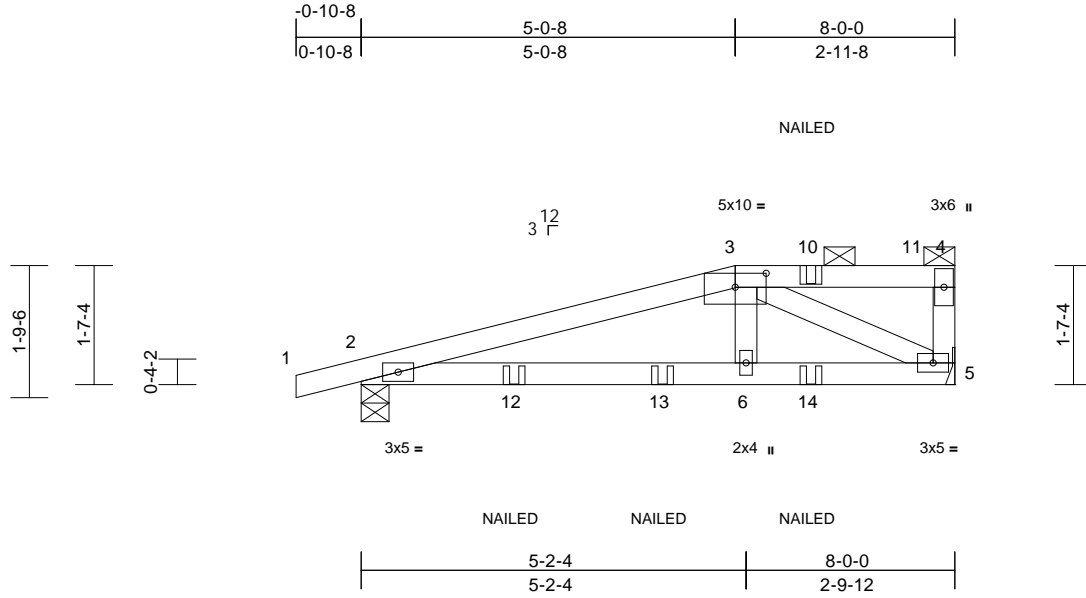
Job 19120012 - B	Truss T8GR	Truss Type Half Hip Girder	Qty 1	Ply 1	Job Reference (optional) E13614553
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:04:06

Page: 1

ID:SQIDBB79XPjG8p3uLvJZS3yVSx9-kC4xoNq5LKwC_kLMgcXu5Cno8kwLdag6vqYuiKyVBie



Scale = 1:31
Plate Offsets (X, Y): [3-0-5-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.06	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.09	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.16	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 32 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x4 SP No.2
 - BOT CHORD 2x4 SP No.2
 - WEBS 2x4 SP No.3
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
 - BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
- REACTIONS** (lb/size) 2=388/0-4-8, 5=330/ Mechanical
Max Horiz 2=43 (LC 10)
Max Uplift 2=-56 (LC 7), 5=-24 (LC 7)
Max Grav 2=488 (LC 31), 5=355 (LC 29)
- FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
- TOP CHORD 2-3=-628/48
 - BOT CHORD 2-12=-33/583, 12-13=-33/583, 6-13=-33/583, 6-14=-31/608, 5-14=-31/608
 - WEBS 3-5=-671/47

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 5.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-48, 3-4=-58, 5-7=-20
Concentrated Loads (lb)
Vert: 12=-70 (F), 13=-43 (F), 14=-4 (F)

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.



October 9, 2019

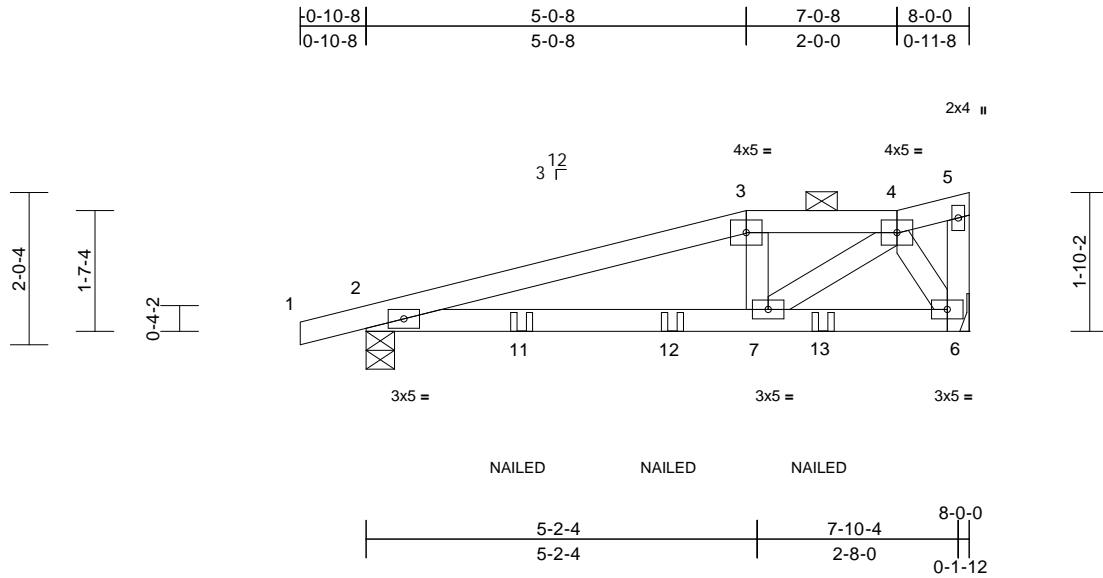
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
19120012 - B	T8GRA	Roof Special Girder	1	1	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Wed Oct 09 10:04:48

Page: 1

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Scale = 1:30.6

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	0.48	Vert(LL)	-0.05	7-10	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.08	7-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.19	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 34 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (lb/size) 2=363/0-4-8, 6=327/ Mechanical
 Max Horiz 2=49 (LC 10)
 Max Uplift 2=61 (LC 7), 6=46 (LC 11)
 Max Grav 2=463 (LC 35), 6=360 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 2-3=615/76, 3-4=567/79
 BOT CHORD 2-11=65/571, 11-12=65/571, 7-12=65/571
 WEBS 4-7=51/450, 4-6=397/61

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- 3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 6.
- 9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-3=48, 3-4=58, 4-5=48, 6-8=20
 Concentrated Loads (lb)
 Vert: 11=35 (B), 12=34 (B), 13=28 (B)



October 9, 2019

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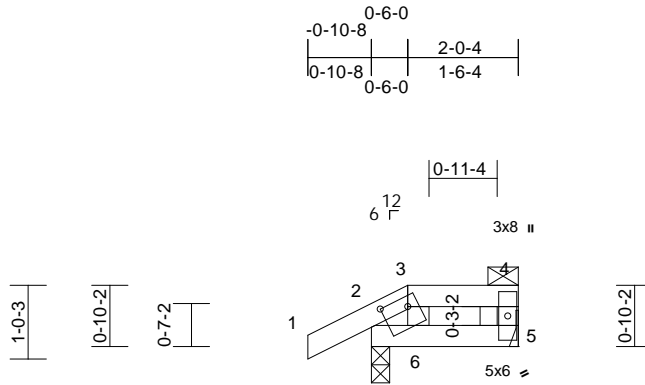
818 Soundside Road
 Edenton, NC 27932

Job 19120012 - B	Truss T9	Truss Type Half Hip	Qty 1	Ply 1	Job Reference (optional) E13614555
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:18
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Page: 1



Scale = 1:31.7

Plate Offsets (X, Y): [3:0-4-4,0-1-11]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	6	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(lb/size) 2=120/0-3-0, 5=62/ Mechanical
Max Horiz 2=21 (LC 14)
Max Uplift 2=7 (LC 15), 5=4 (LC 12)
Max Grav 2=161 (LC 35), 5=88 (LC 34)

FORCES

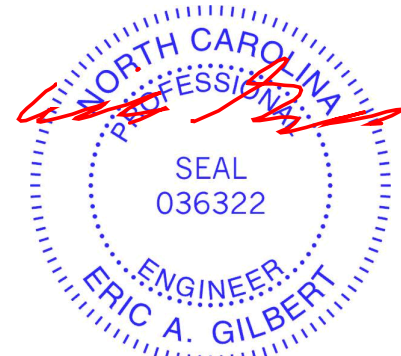
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-28/45, 3-4=-10/11, 4-5=-58/34
BOT CHORD 2-6=-33/15, 5-6=-10/11
WEBS 3-6=-52/35

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 5.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

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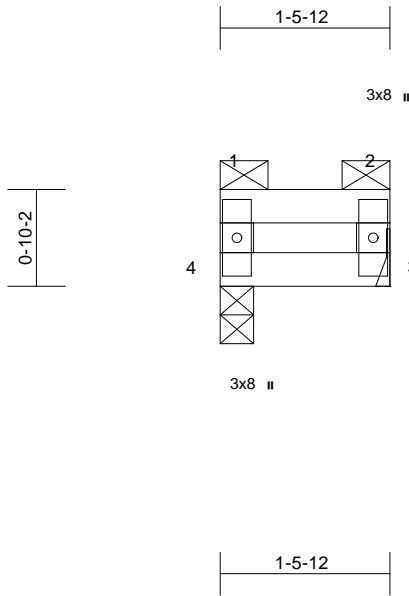
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T9A	Truss Type Flat	Qty 1	Ply 1	Job Reference (optional) E13614556
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 S Sep 21 2019 Print: 8.320 S Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:19
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Page: 1



Scale = 1:20.1

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	0.02	Vert(LL)	0.00	4	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	4	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 5 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 3=46/ Mechanical, 4=46/0-3-8
Max Horiz 4=-16 (LC 9)
Max Uplift 3=-5 (LC 10), 4=-5 (LC 9)
Max Grav 3=47 (LC 2), 4=47 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

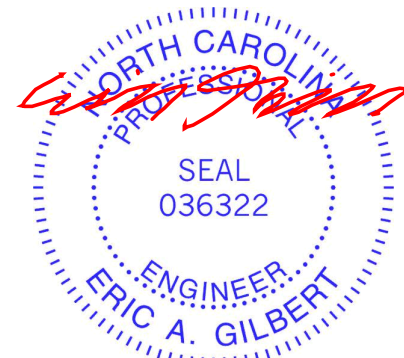
TOP CHORD 1-4=-36/33, 1-2=-8/6, 2-3=-36/33
BOT CHORD 3-4=-19/22

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C
Exterior (2) zone; cantilever left and right exposed; end
vertical left and right exposed; C-C for members and
forces & MWFRS for reactions shown; Lumber
DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber
DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground
snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15
Plate DOL=1.15); Category II; Exp B; Fully Exp.;
Ct=1.10, Lu=50-0-0
- 3) Provide adequate drainage to prevent water ponding.
- 4) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 5) Bearings are assumed to be: Joint 4 SP No.2 crushing
capacity of 565 psi.
- 6) Refer to girder(s) for truss to truss connections.

- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 5 lb uplift at joint
3.
- 8) One RT7A USP connectors recommended to connect
truss to bearing walls due to UPLIFT at jt(s) 4. This
connection is for uplift only and does not consider lateral
forces.
- 9) This truss is designed in accordance with the 2015
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY
TRENCO
A MiTek Affiliate

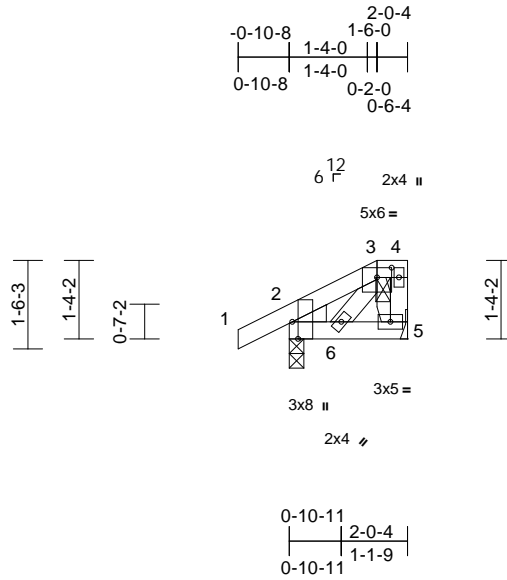
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T10	Truss Type Half Hip	Qty 1	Ply 1	Job Reference (optional) E13614557
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:19
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Page: 1



Scale = 1:39.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	6	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 13 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (lb/size) 2=115/0-3-0, 5=57/ Mechanical
 Max Horiz 2=36 (LC 14)
 Max Uplift 2=-9 (LC 15), 5=-7 (LC 12)
 Max Grav 2=187 (LC 35), 5=63 (LC 2)

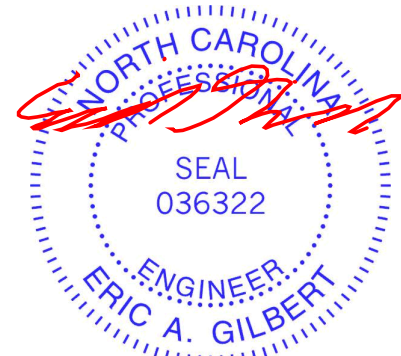
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/33, 2-3=-54/26, 3-4=-19/21, 4-5=-16/9
 BOT CHORD 2-6=-43/50, 5-6=-29/31
 WEBS 3-6=-22/36, 3-5=-47/47

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 5.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
 - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



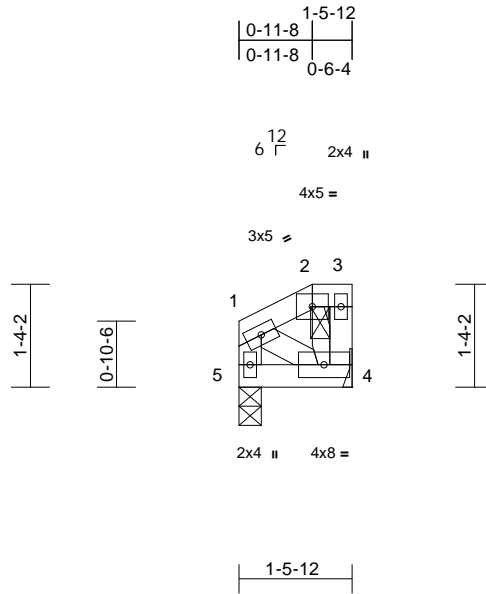
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T10A	Truss Type Half Hip	Qty 1	Ply 1	Job Reference (optional) E13614558
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.32 E Sep 21 2019 Print: 8.320 E Sep 21 2019 MiTek Industries, Inc. Tue Oct 08 15:22:20
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Page: 1



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	0.02	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	4-5	>999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a	
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 9 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (lb/size) 4=43/ Mechanical, 5=41/0-3-8
Max Horiz 5=31 (LC 12)
Max Uplift 4=14 (LC 12), 5=-1 (LC 15)
Max Grav 4=47 (LC 2), 5=59 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension

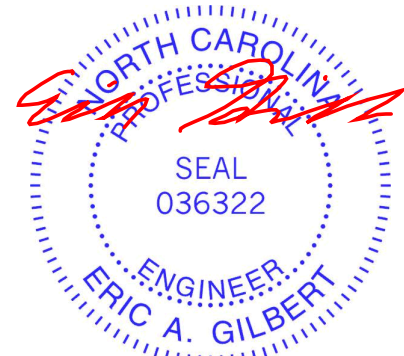
TOP CHORD 1-2=-30/19, 2-3=-19/21, 3-4=-16/9,
1-5=-47/33
BOT CHORD 4-5=-64/50
WEBS 2-4=-35/37, 1-4=-29/43

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Bearings are assumed to be: Joint 5 SP No.2 crushing capacity of 565 psi.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 4.
- 10) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

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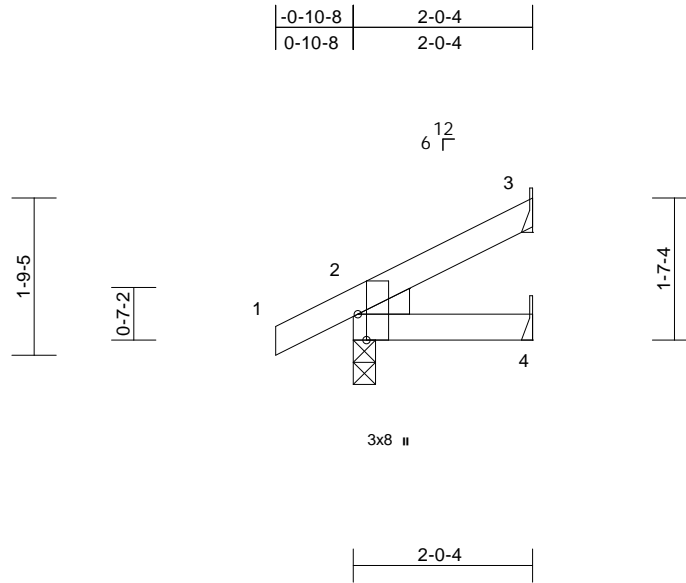
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T11	Truss Type Jack-Open	Qty 1	Ply 1	Job Reference (optional) E13614559
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:26

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	13.9/20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-0-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 2=117/0-3-0, 3=35/ Mechanical, 4=22/ Mechanical
Max Horiz 2=36 (LC 15)
Max Uplift 2=-2 (LC 15), 3=-14 (LC 15)
Max Grav 2=143 (LC 2), 3=43 (LC 2), 4=23 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-29/27
BOT CHORD 2-4=-31/25

NOTES

- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior (2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 3.
- One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY
TRENCO
A MiTek Affiliate

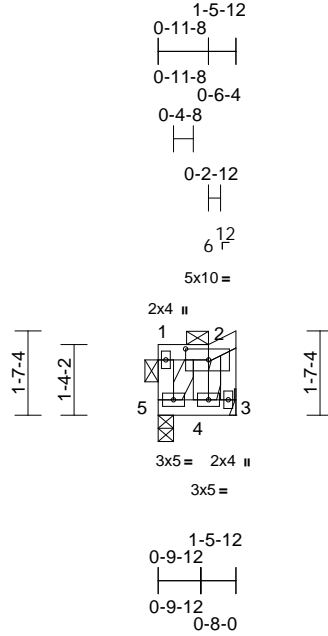
818 Soundside Road
Edenton, NC 27932

Job 19120012 - B	Truss T11A	Truss Type Roof Special	Qty 1	Ply 1	Job Reference (optional) E13614560
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:43.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	18.9/20.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 11 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=40/ Mechanical, 5=46/0-3-8
Max Horiz 5=35 (LC 10)
Max Uplift 3=-16 (LC 10), 5=-14 (LC 9)
Max Grav 3=41 (LC 2), 5=48 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

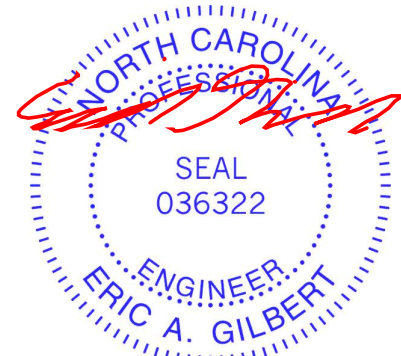
TOP CHORD 1-5=-32/29, 1-2=-21/25, 2-3=-56/59
BOT CHORD 4-5=-20/28, 3-4=-22/24
WEBS 2-5=-57/42, 2-4=0/11

NOTES

- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C
Exterior (2) zone; cantilever left and right exposed ; end
vertical left and right exposed; C-C for members and
forces & MWFRS for reactions shown; Lumber
DOL=1.60 plate grip DOL=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber
DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground
snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15
Plate DOL=1.15); Category II; Exp B; Fully Exp.;
Ct=1.10, Lu=50-0-0
- 3) Provide adequate drainage to prevent water ponding.

- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Bearings are assumed to be: Joint 5 SP No.2 crushing capacity of 565 psi.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 3.
- 8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9, 2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

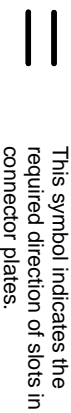
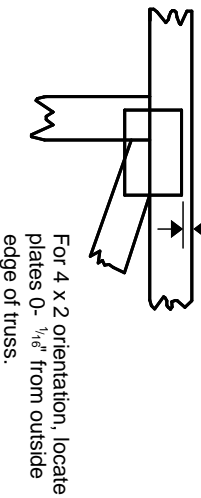
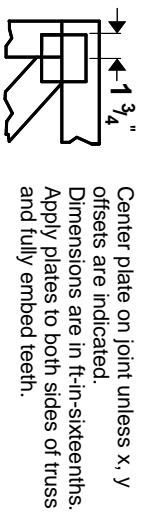
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



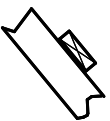
* Plate location details available in **MITrak 20/20 software or upon request.**

PLATE SIZE

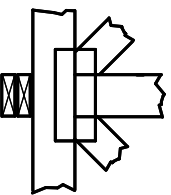
4 X 4

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

LATERAL BRACING LOCATION



BEARING

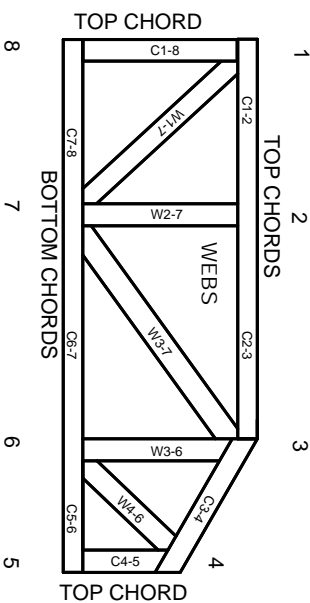


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI 1: 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



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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, 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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MII-7473 rev. 10/03/2015



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.